



12859 - UV Imaging of LSB Galaxies

Cycle: 20, Proposal Category: GO

(Availability Mode: SUPPORTED)

INVESTIGATORS

<i>Name</i>	<i>Institution</i>	<i>E-Mail</i>
Prof. James M. Schombert (PI) (Contact)	University of Oregon	jschombe@uoregon.edu
Dr. Stacey S. McGaugh (CoI)	University of Maryland	ssm@astro.umd.edu

VISITS

<i>Visit</i>	<i>Targets used in Visit</i>	<i>Configurations used in Visit</i>	<i>Orbits Used</i>	<i>Last Orbit Planner Run</i>	<i>OP Current with Visit?</i>
01	(1) LSB-F415-3	WFC3/UVIS	5	16-Apr-2013 21:01:14.0	yes
02	(1) LSB-F415-3	WFC3/UVIS	3	16-Apr-2013 21:01:33.0	yes
03	(2) UGC-159	WFC3/UVIS	5	16-Apr-2013 21:01:52.0	yes
04	(2) UGC-159	WFC3/UVIS	3	16-Apr-2013 21:02:09.0	yes
05	(3) VLSB-F750-V01	WFC3/UVIS	5	16-Apr-2013 21:02:30.0	yes
06	(3) VLSB-F750-V01	WFC3/UVIS	3	16-Apr-2013 21:02:46.0	yes
07	(1) LSB-F415-3	WFC3/UVIS	2	16-Apr-2013 21:02:55.0	yes
08	(2) UGC-159	WFC3/UVIS	2	16-Apr-2013 21:03:04.0	yes
09	(3) VLSB-F750-V01	WFC3/UVIS	2	16-Apr-2013 21:03:12.0	yes

30 Total Orbits Used

ABSTRACT

This project is to obtain F336W, F555W and F814W (UVI) imaging of the last type of galaxy missing from the HST archives, low surface brightness (LSB) galaxies. LSB galaxies are unusual in having weak H-alpha emission with no signature of the ionizing stellar population in deep optical images nor in B-V color maps. We propose to obtain WFC3 imaging (with its improved UV response) to resolve the star forming population in three nearby LSB galaxies (F415-3, F608-1 and F750-V1). This will allow us to resolve the young star clusters and map the top of the CMD in order to estimate the age and IMF of the underlying stellar population.

OBSERVING DESCRIPTION

We have three galaxy targets imaged with WFC3 using F336W, F555W and F814W. For our allocation of 30 orbits, we wish to spend 10 orbits on each galaxy. Of those 10 (due to a 5 orbit limit per visit), we wish to use 5 on F336W, 3 on F555W and 2 on F814W. We will group the F555W and F814W orbits into one visit. Due to the low surface brightness nature of the galaxies, we request LOW-SKY observations.

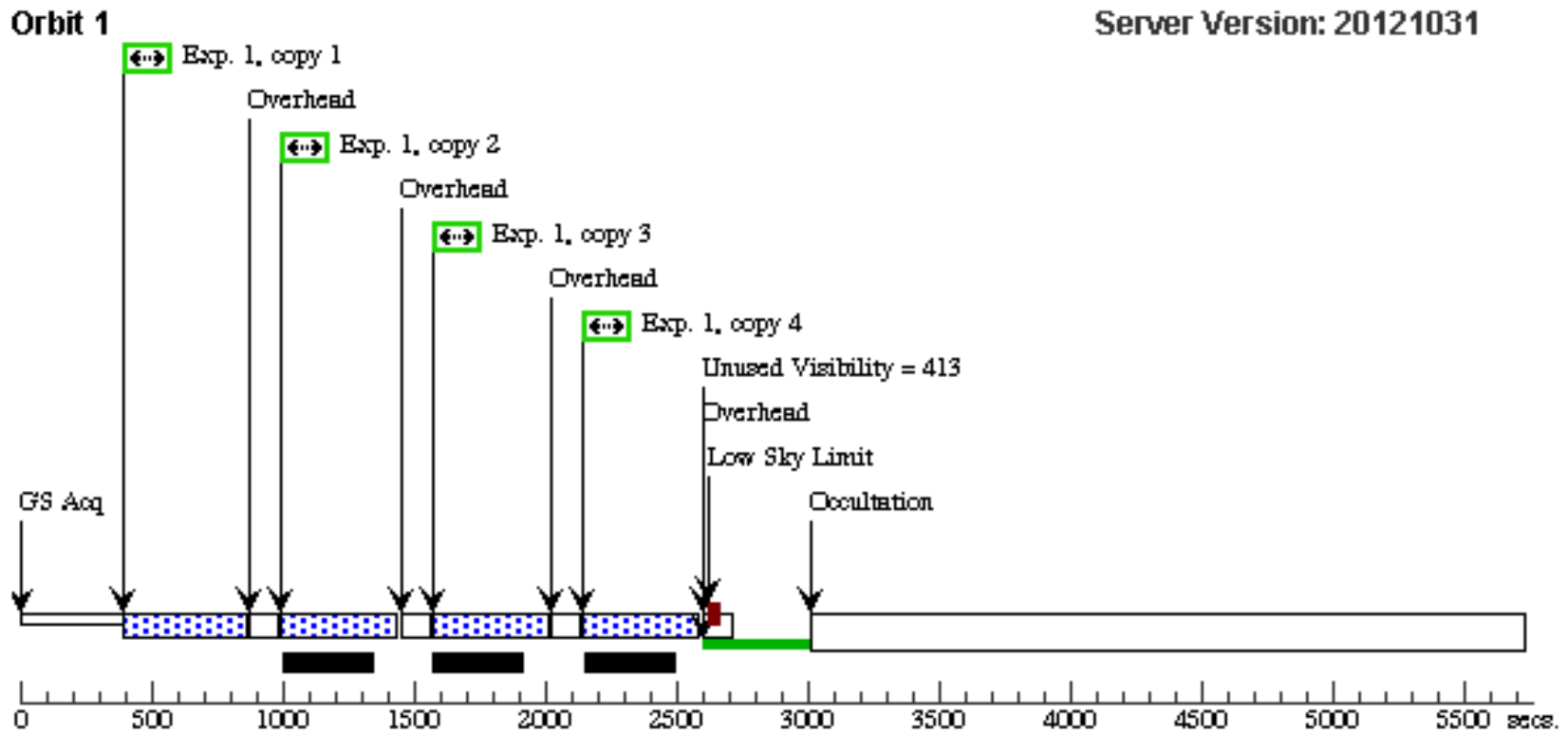
We have broken each orbit into four exposures with a UVIS-DITHER-BOX for CR subtractions. It is unclear what value for FLASH we should apply to our F336W observations, so we have selected 10. We believe that the observations should be divided into two 5 orbit visits per object (5 for F336W, 3+2 for F555W, F814W); however, APT will not allow us to do that.

Proposal 12859 - Visit 01 - UV Imaging of LSB Galaxies

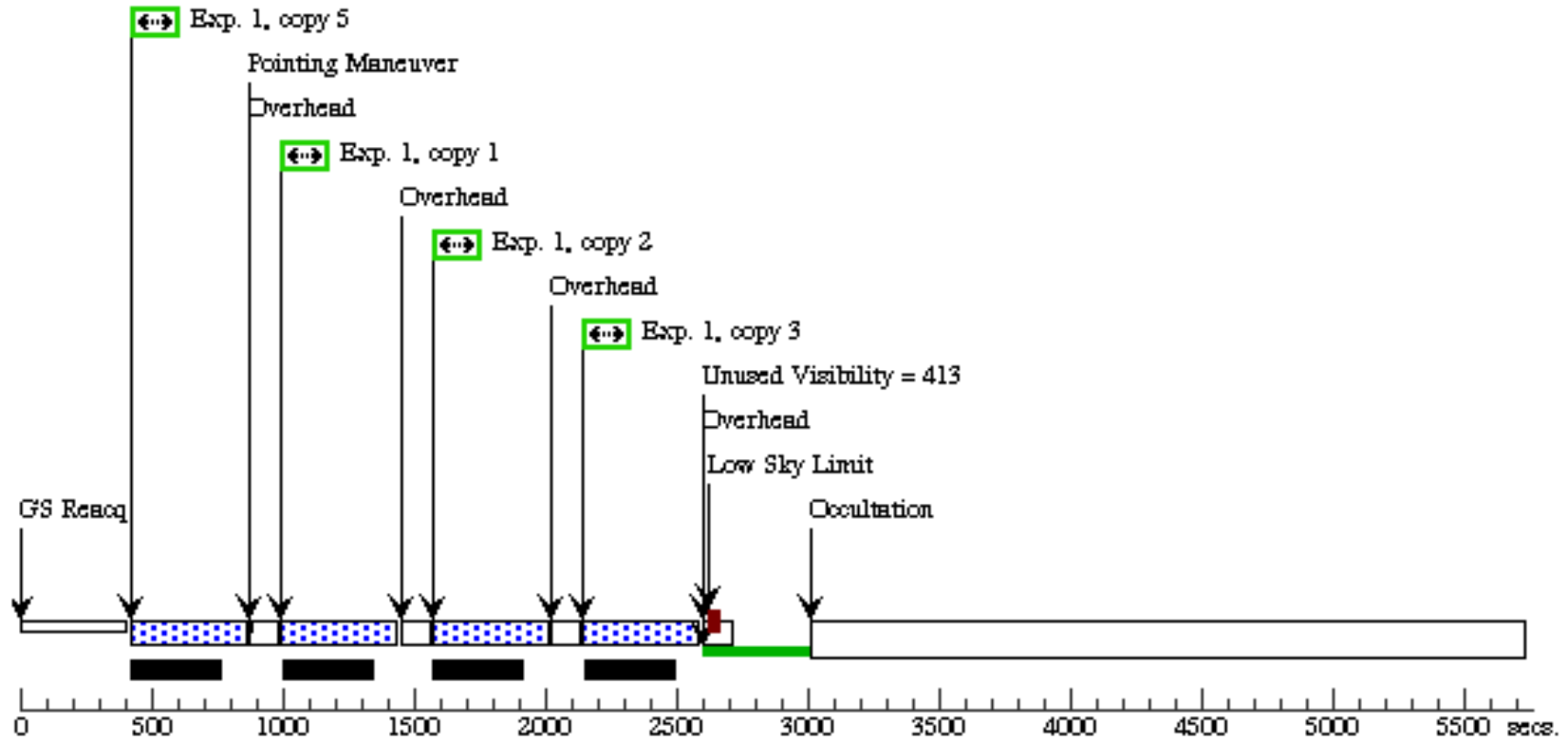
Wed Apr 17 01:03:20 GMT 2013

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Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(1)	LSB-F415-3	RA: 02 32 45.0000 (38.1875000d) Dec: +28 50 18.00 (28.83833d) Equinox: J2000		V=14.7+/-0.1	Reference Frame: ICRS				
	<i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i>									
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(1) LSB-F415-3	WFC3/UVIS, ACCUM, UVIS-CENTER	F336W	FLASH=12	LOW-SKY	Pattern 1, Exps 1-1 in Visit 01 (1)	440 Secs X 5	
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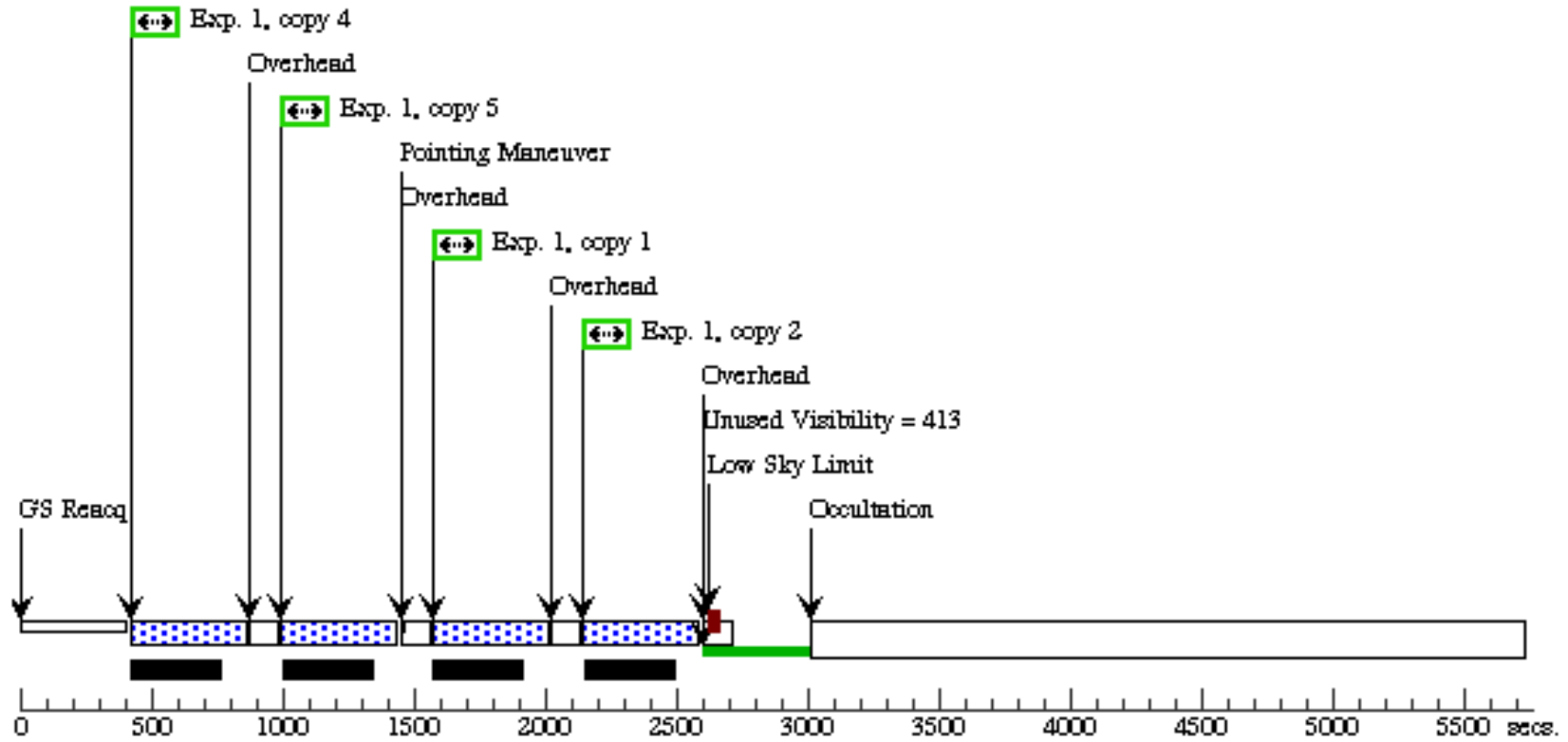
Orbit Structure



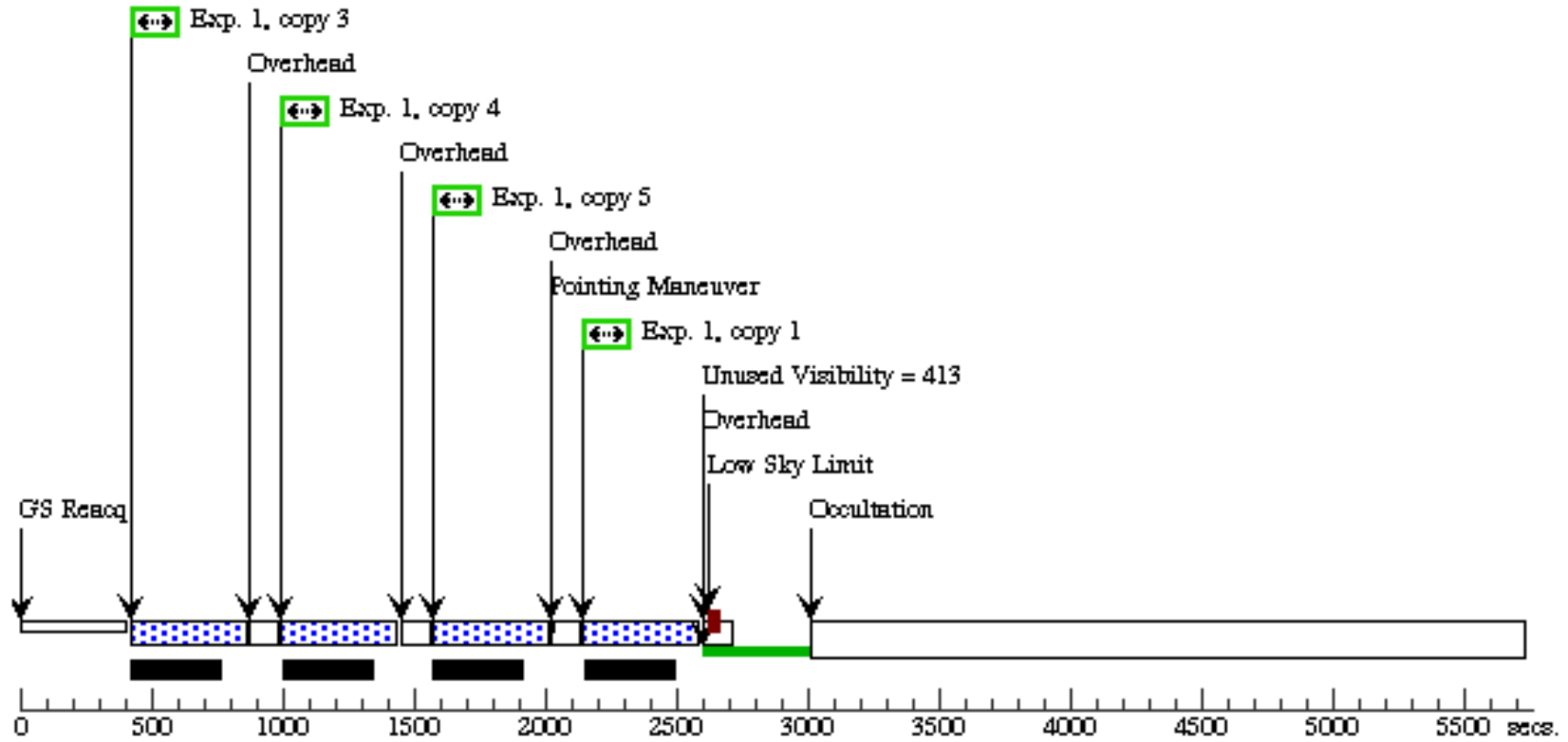
Orbit 2



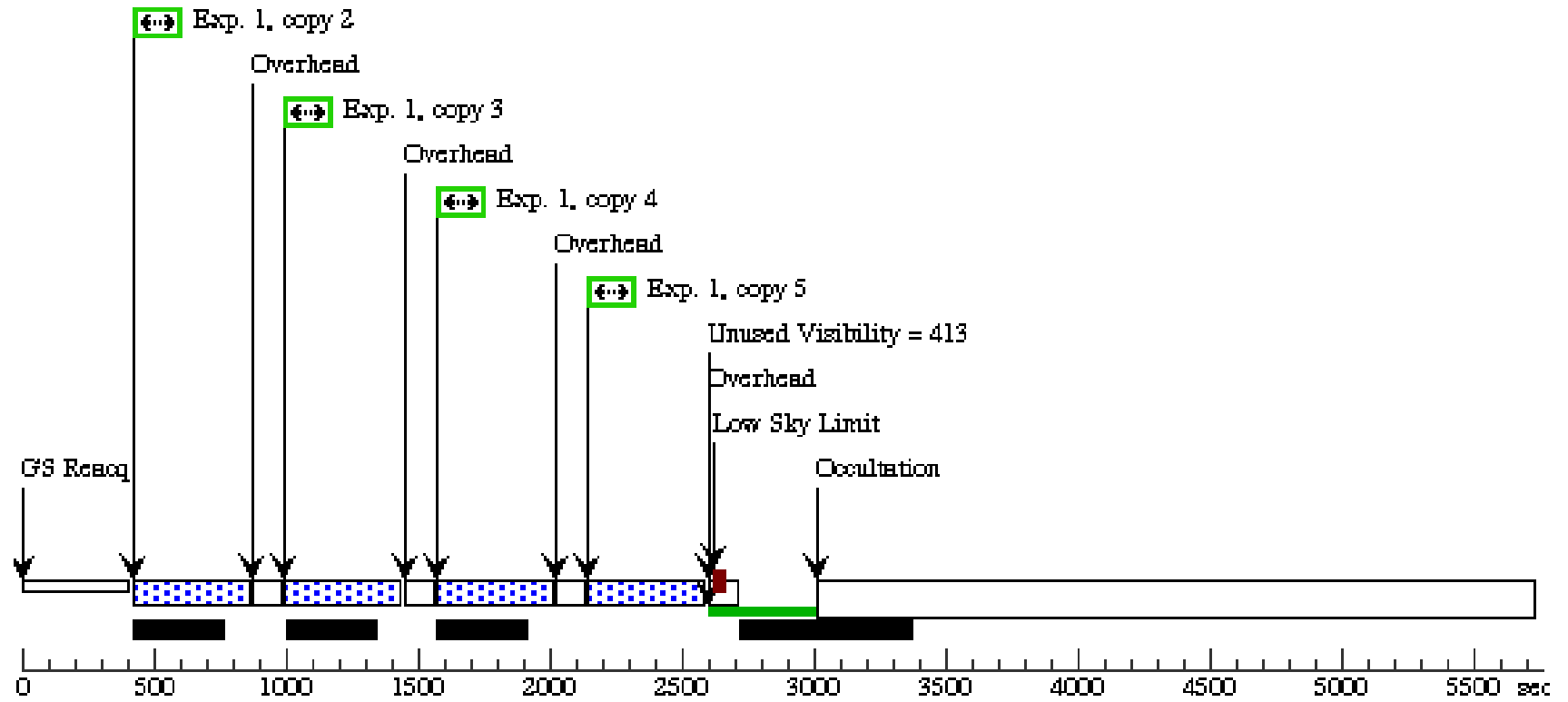
Orbit 3



Orbit 4



Orbit 5

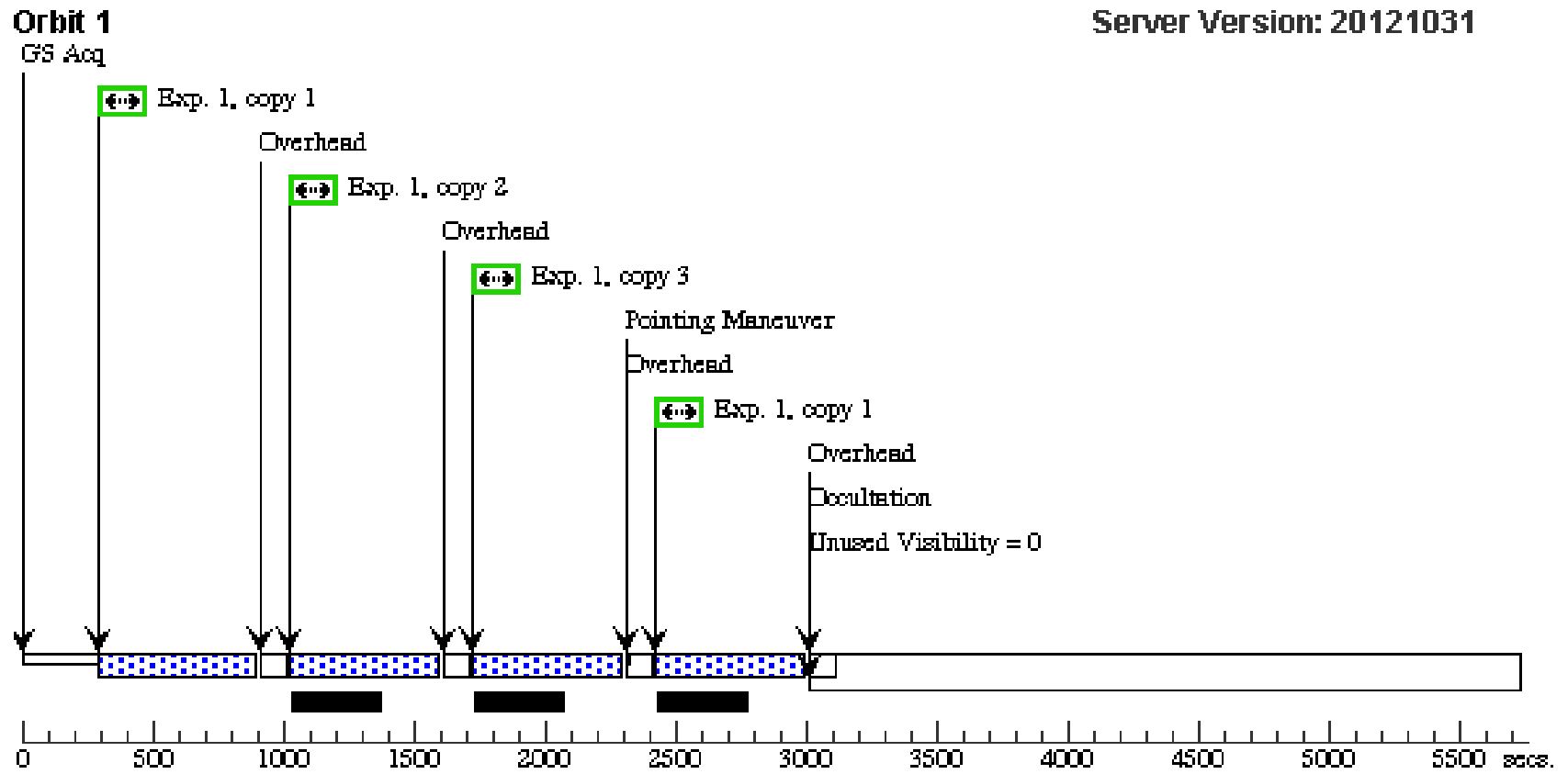


Proposal 12859 - Visit 02 - UV Imaging of LSB Galaxies

Wed Apr 17 01:03:28 GMT 2013

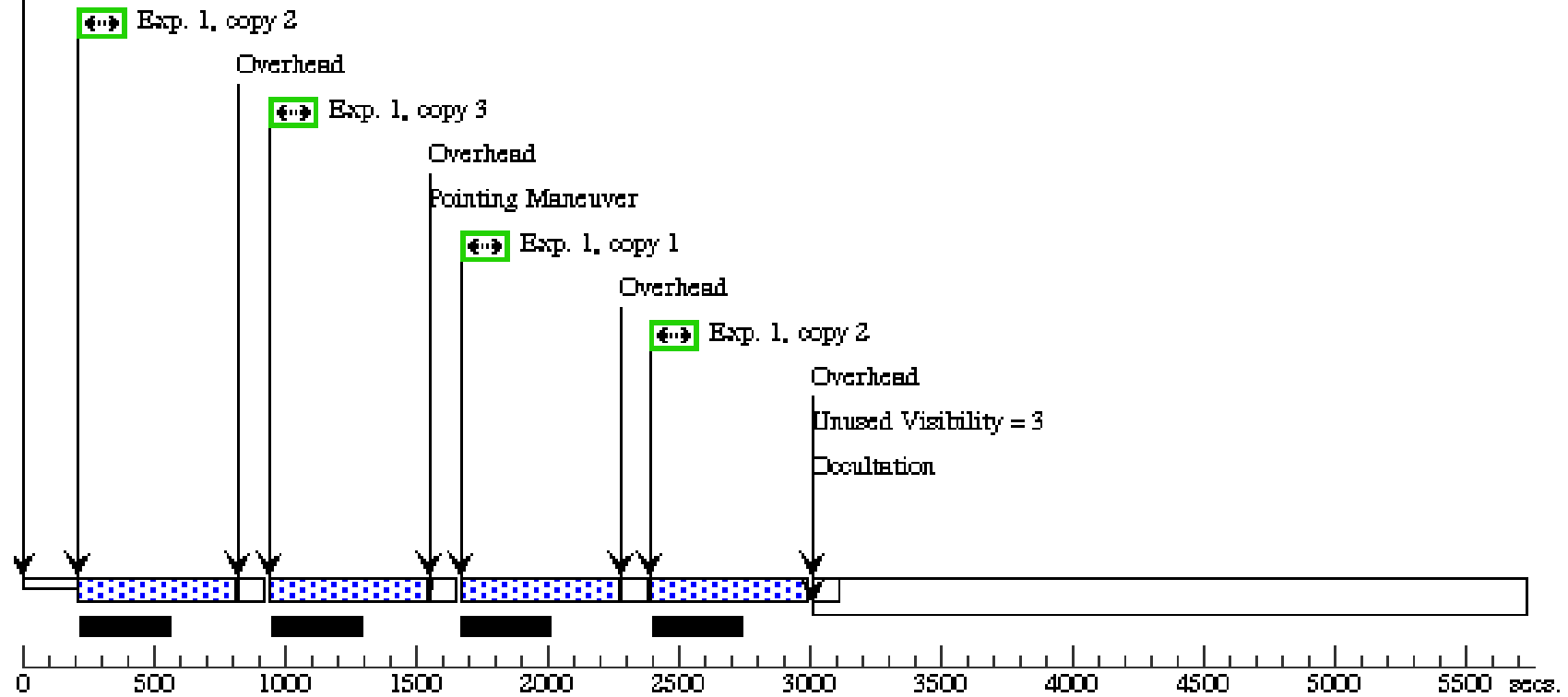
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Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(1)	LSB-F415-3	RA: 02 32 45.0000 (38.1875000d) Dec: +28 50 18.00 (28.83833d) Equinox: J2000		V=14.7+/-0.1	Reference Frame: ICRS				
	<i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i>									
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(1) LSB-F415-3	WFC3/UVIS, ACCUM, UVIS-CENTER	F555W				Pattern 1, Exps 1-1 i n Visit 02 (1)	400 Secs X 3 [==>572.0 Secs (Pattern 1, Copy 1)] [==>572.0 Secs (Pattern 1, Copy 2)] [==>572.0 Secs (Pattern 1, Copy 3)] [==>572.0 Secs (Pattern 2, Copy 1)] [==>599.0 Secs (Pattern 2, Copy 2)] [==>599.0 Secs (Pattern 2, Copy 3)] [==>599.0 Secs (Pattern 3, Copy 1)] [==>599.0 Secs (Pattern 3, Copy 2)] [==>599.0 Secs (Pattern 3, Copy 3)] [==>599.0 Secs (Pattern 4, Copy 1)] [==>599.0 Secs (Pattern 4, Copy 2)] [==>599.0 Secs (Pattern 4, Copy 3)]

Orbit Structure



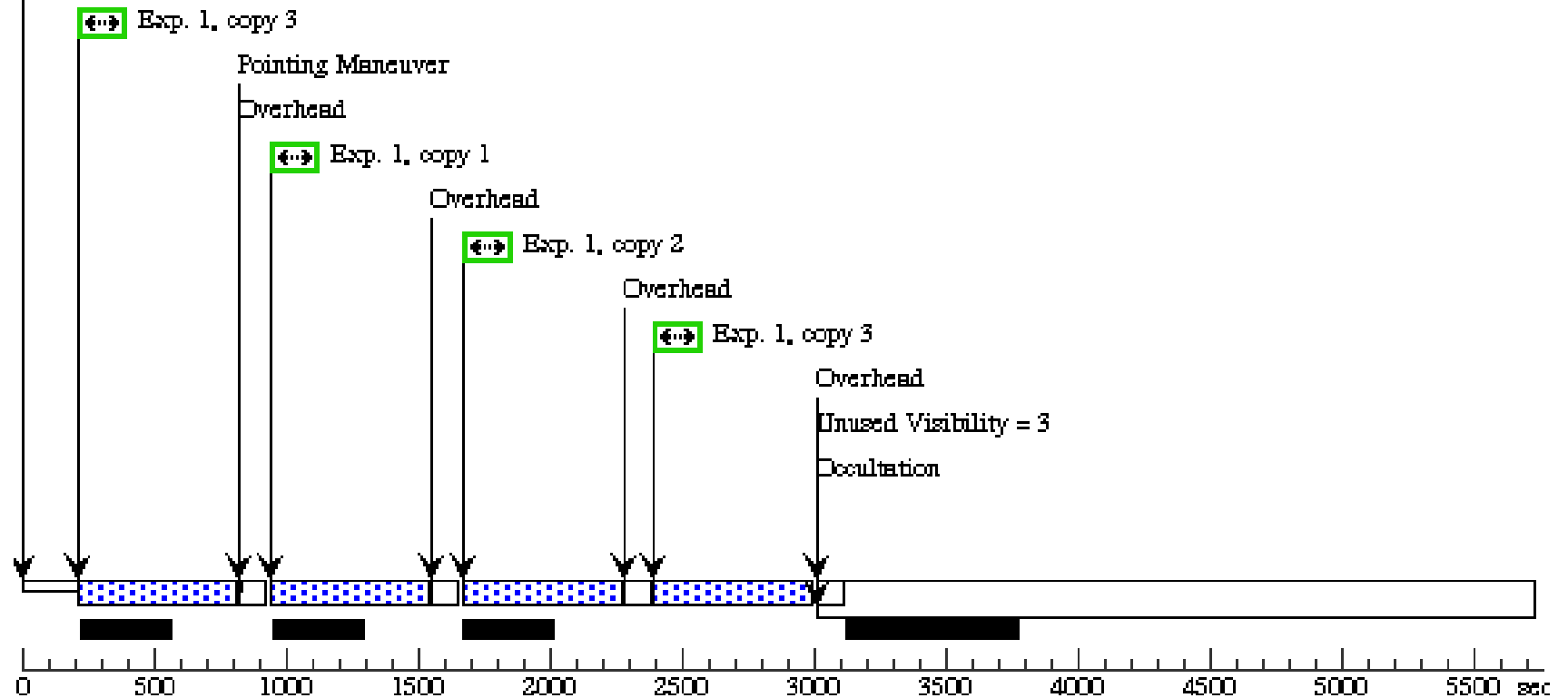
Orbit 2

GS Reacq



Orbit 3

GS Req

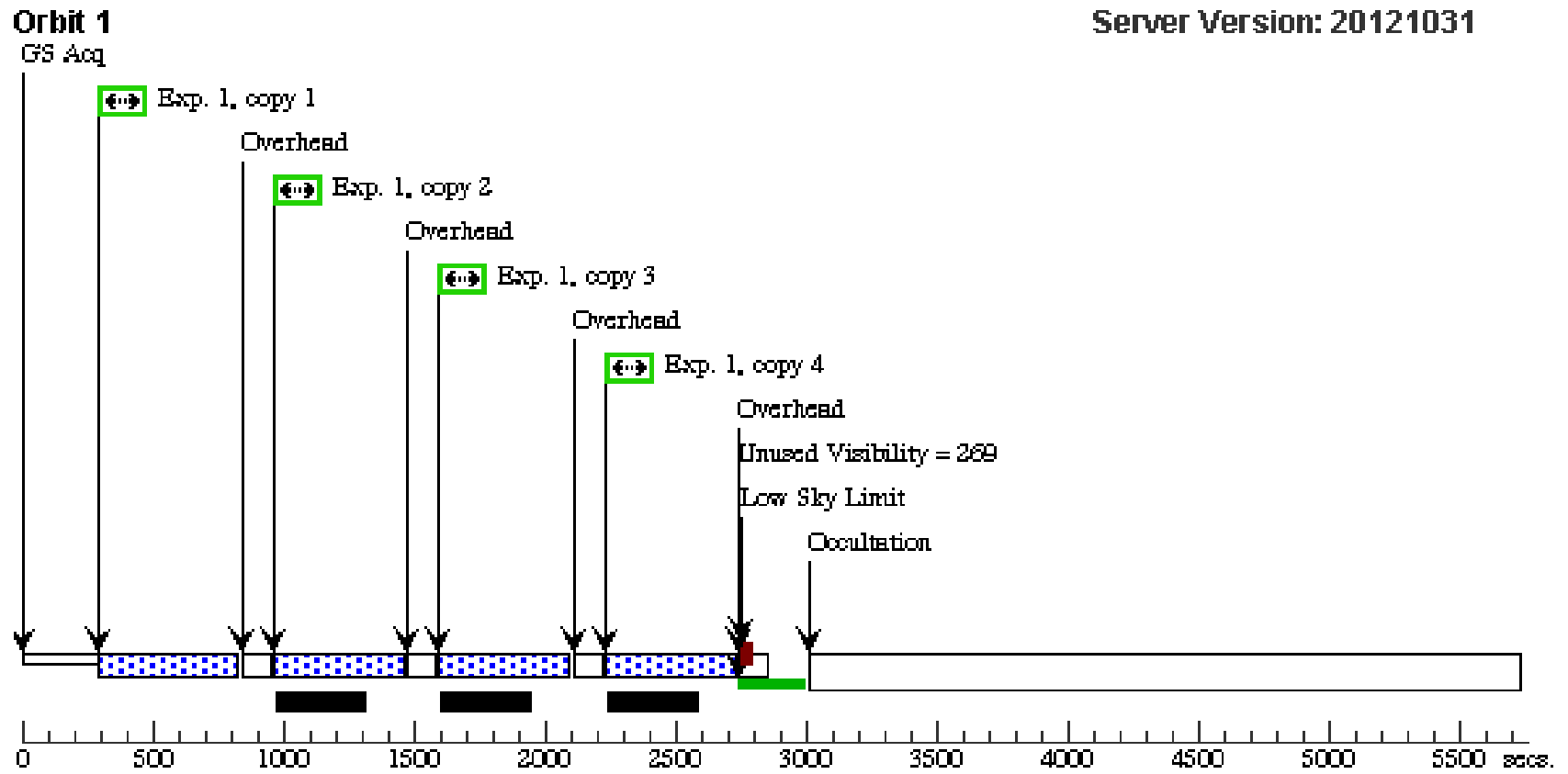


Proposal 12859 - Visit 03 - UV Imaging of LSB Galaxies

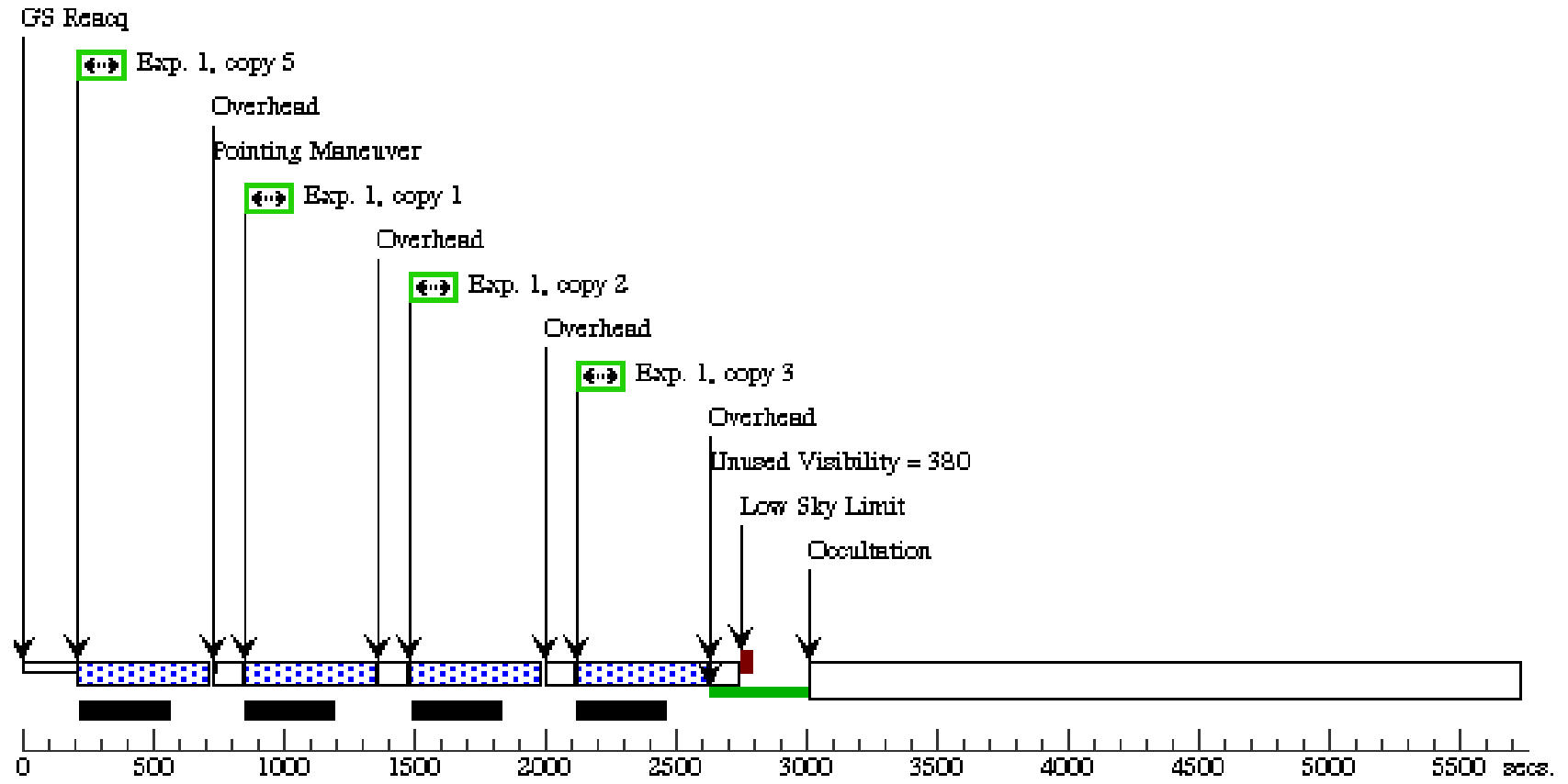
Wed Apr 17 01:03:31 GMT 2013

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Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(2)	UGC-159	RA: 00 17 16.1700 (4.3173750d) Dec: +17 31 21.60 (17.52267d) Equinox: J2000		V=16.1+/-0.1	Reference Frame: ICRS				
	<i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i>									
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(2) UGC-159	WFC3/UVIS, ACCUM, UVIS-CENTER	F336W	FLASH=12	LOW-SKY	Pattern 1, Exps 1-1 i n Visit 03 (1)	500 Secs X 5	
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								[==>(Pattern 1, Copy 2)]		
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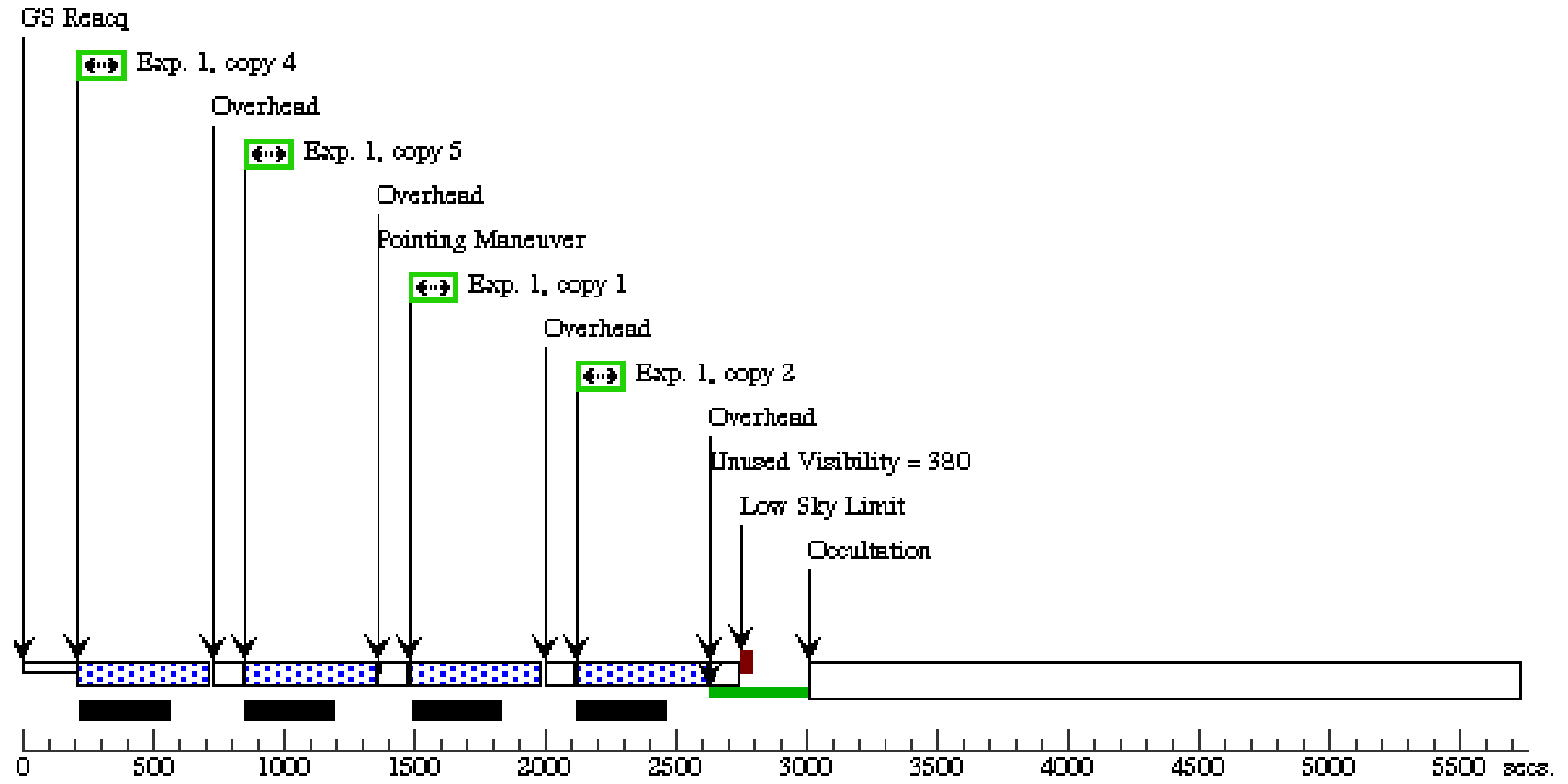
Orbit Structure



Orbit 2

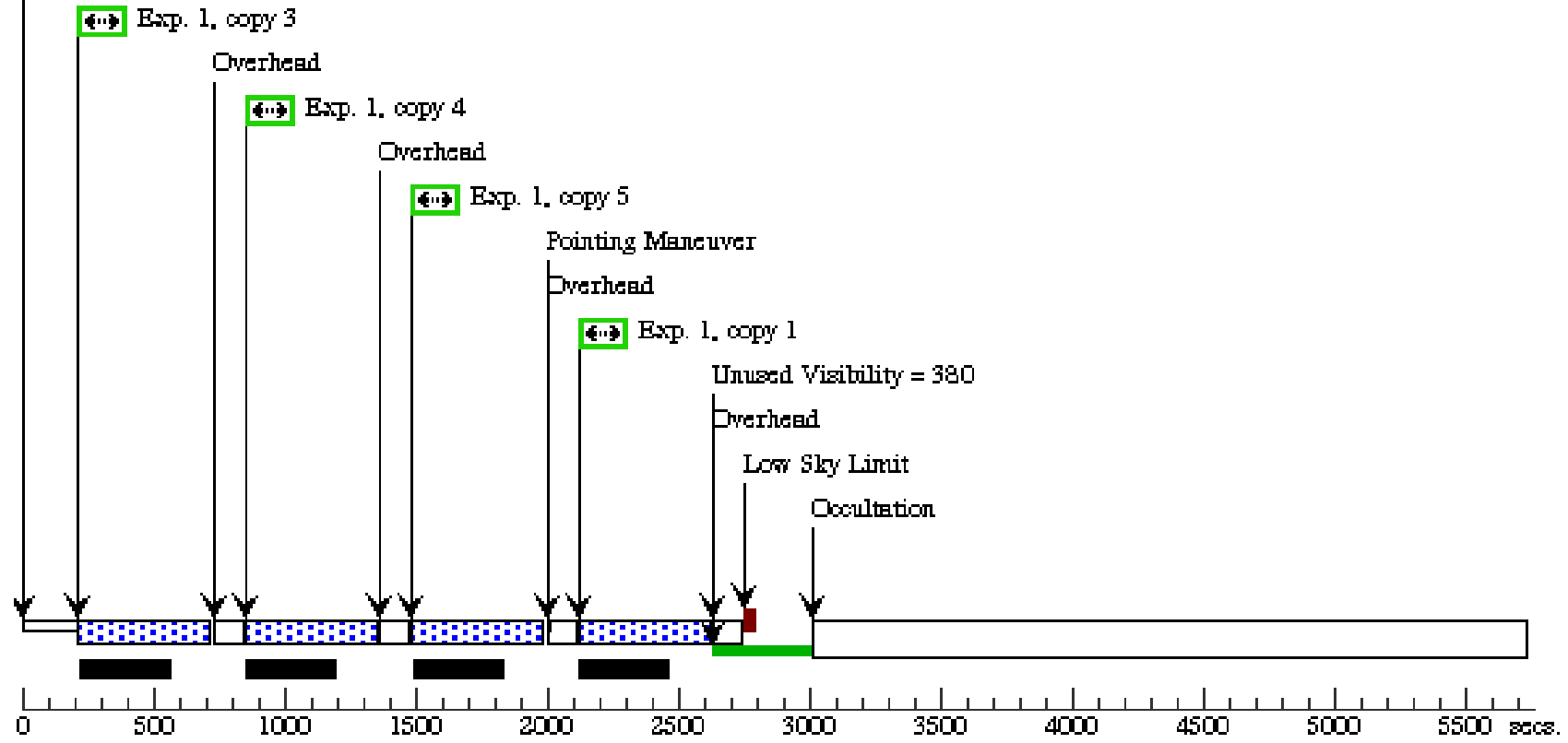


Orbit 3



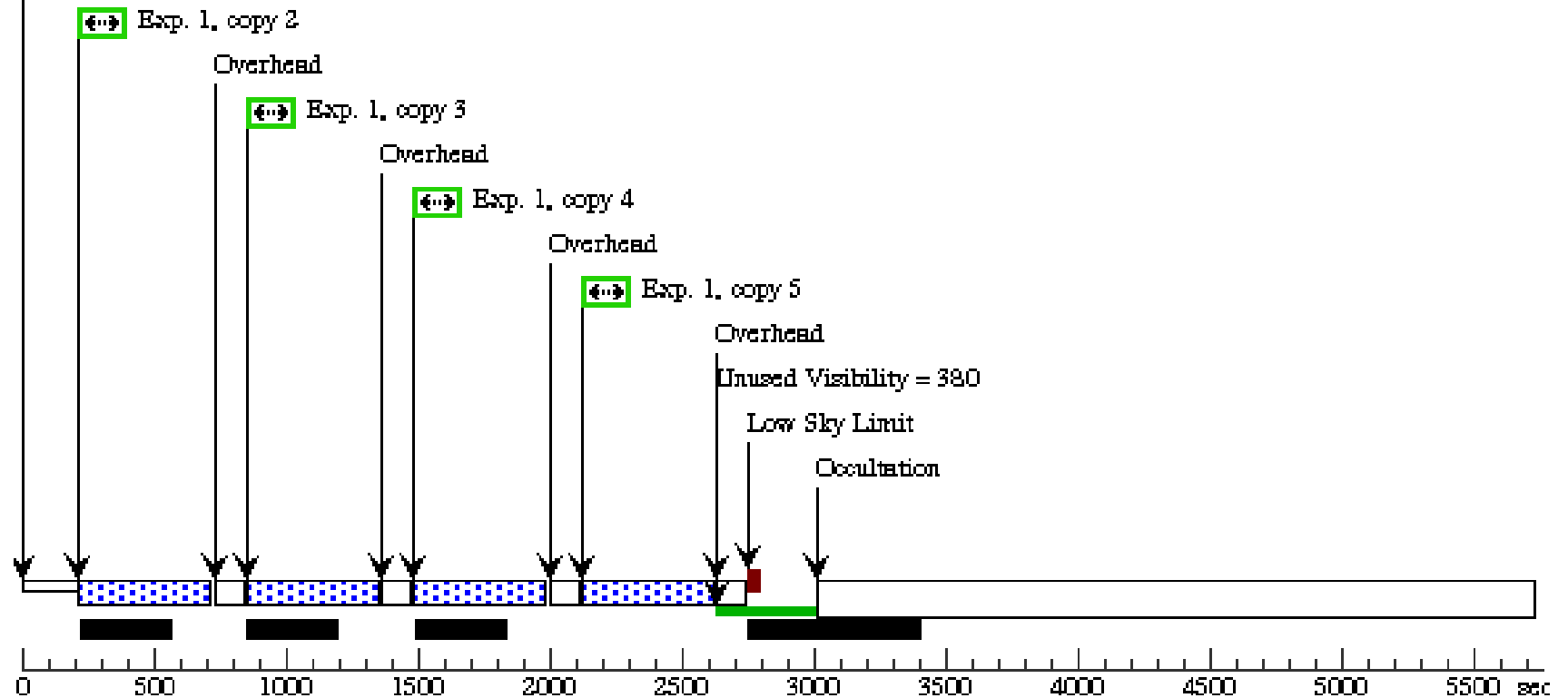
Orbit 4

GS Reacq



Orbit 5

GS Req

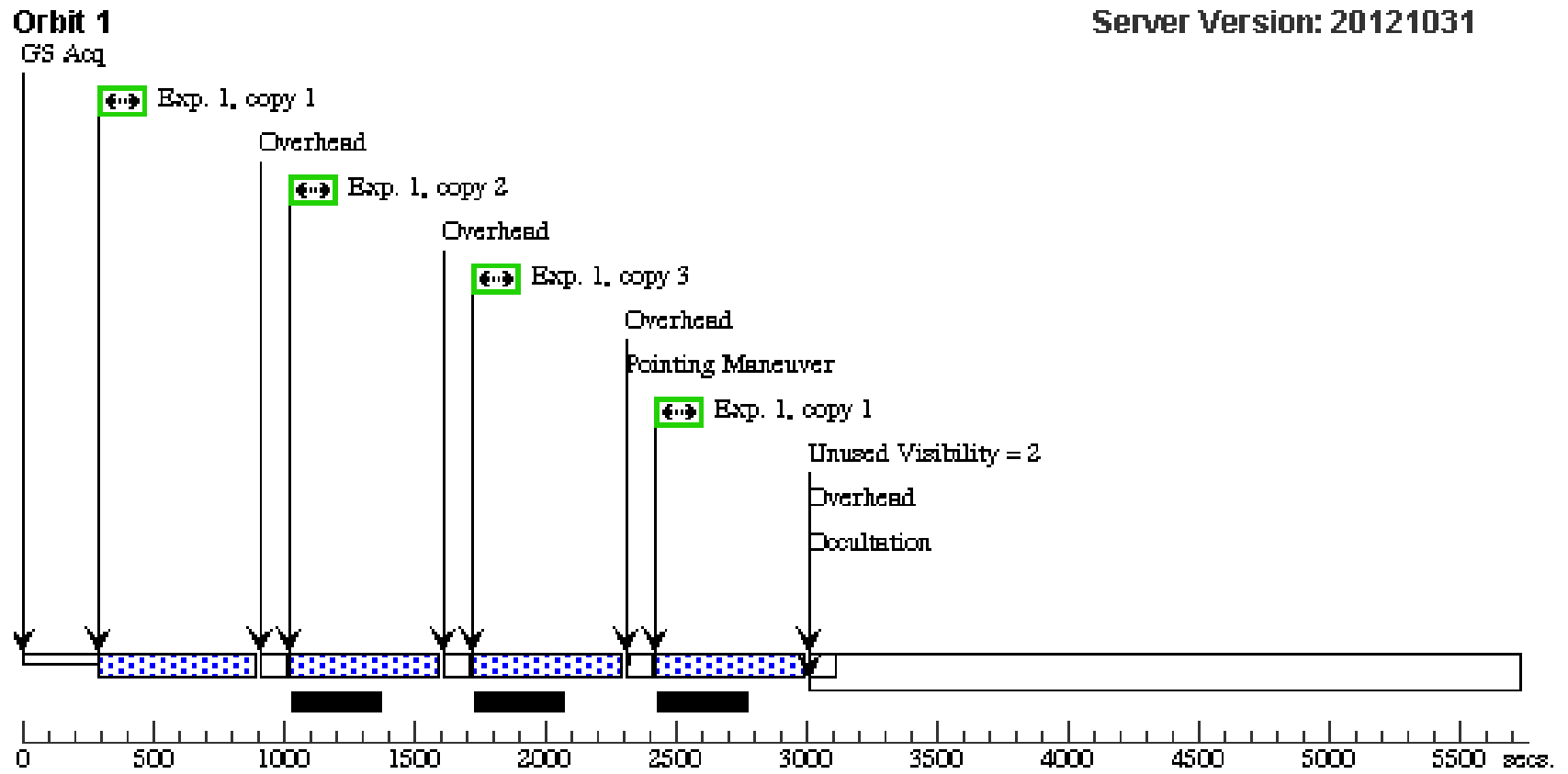


Proposal 12859 - Visit 04 - UV Imaging of LSB Galaxies

Wed Apr 17 01:03:36 GMT 2013

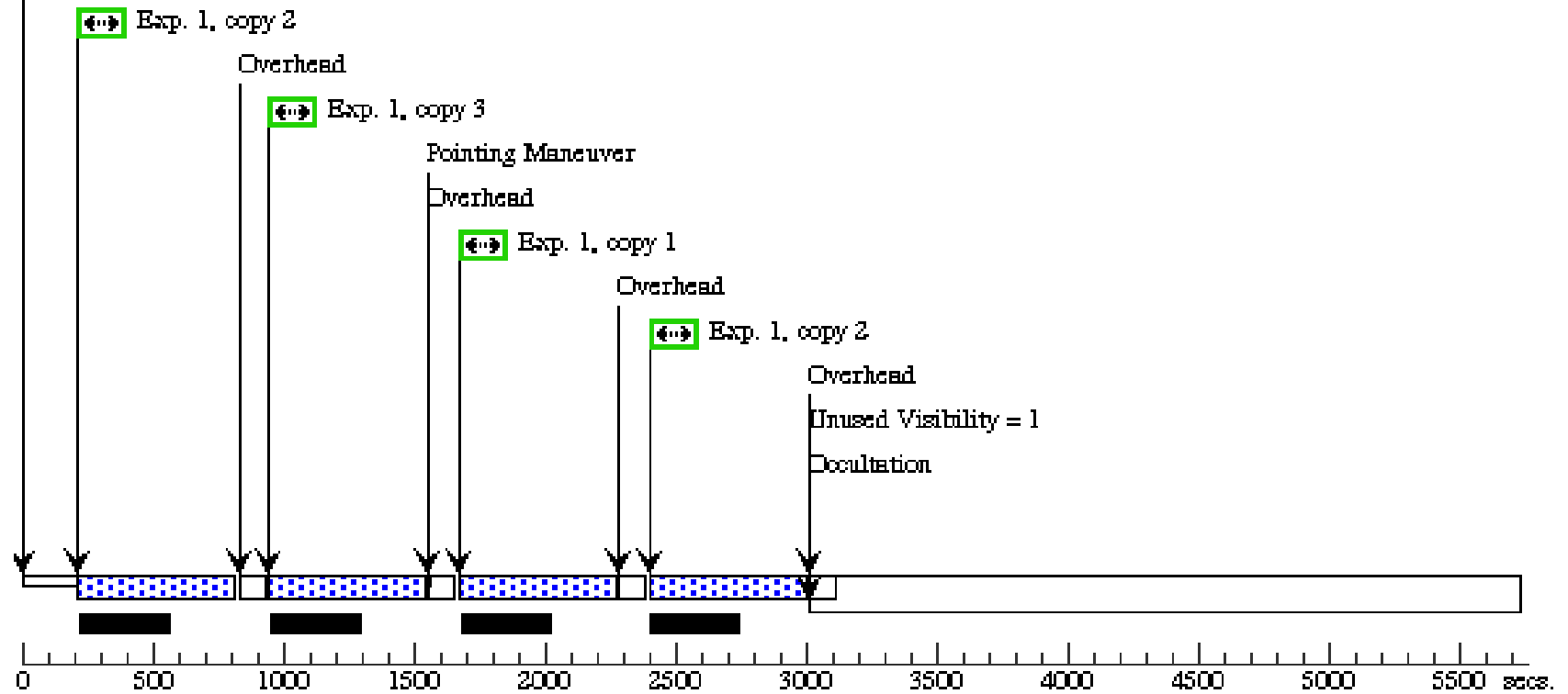
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Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(2)	UGC-159	RA: 00 17 16.1700 (4.3173750d) Dec: +17 31 21.60 (17.52267d) Equinox: J2000		V=16.1+/-0.1	Reference Frame: ICRS				
	<i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i>									
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(2) UGC-159	WFC3/UVIS, ACCUM, UVIS-CENTER	F555W				Pattern 1, Exps 1-1 i n Visit 04 (1)	500 Secs X 3 [==>572.0 Secs (Pattern 1, Copy 1)] [==>572.0 Secs (Pattern 1, Copy 2)] [==>572.0 Secs (Pattern 1, Copy 3)] [==>572.0 Secs (Pattern 2, Copy 1)] [==>600.0 Secs (Pattern 2, Copy 2)] [==>600.0 Secs (Pattern 2, Copy 3)] [==>600.0 Secs (Pattern 3, Copy 1)] [==>600.0 Secs (Pattern 3, Copy 2)] [==>600.0 Secs (Pattern 3, Copy 3)] [==>600.0 Secs (Pattern 4, Copy 1)] [==>600.0 Secs (Pattern 4, Copy 2)] [==>600.0 Secs (Pattern 4, Copy 3)]

Orbit Structure



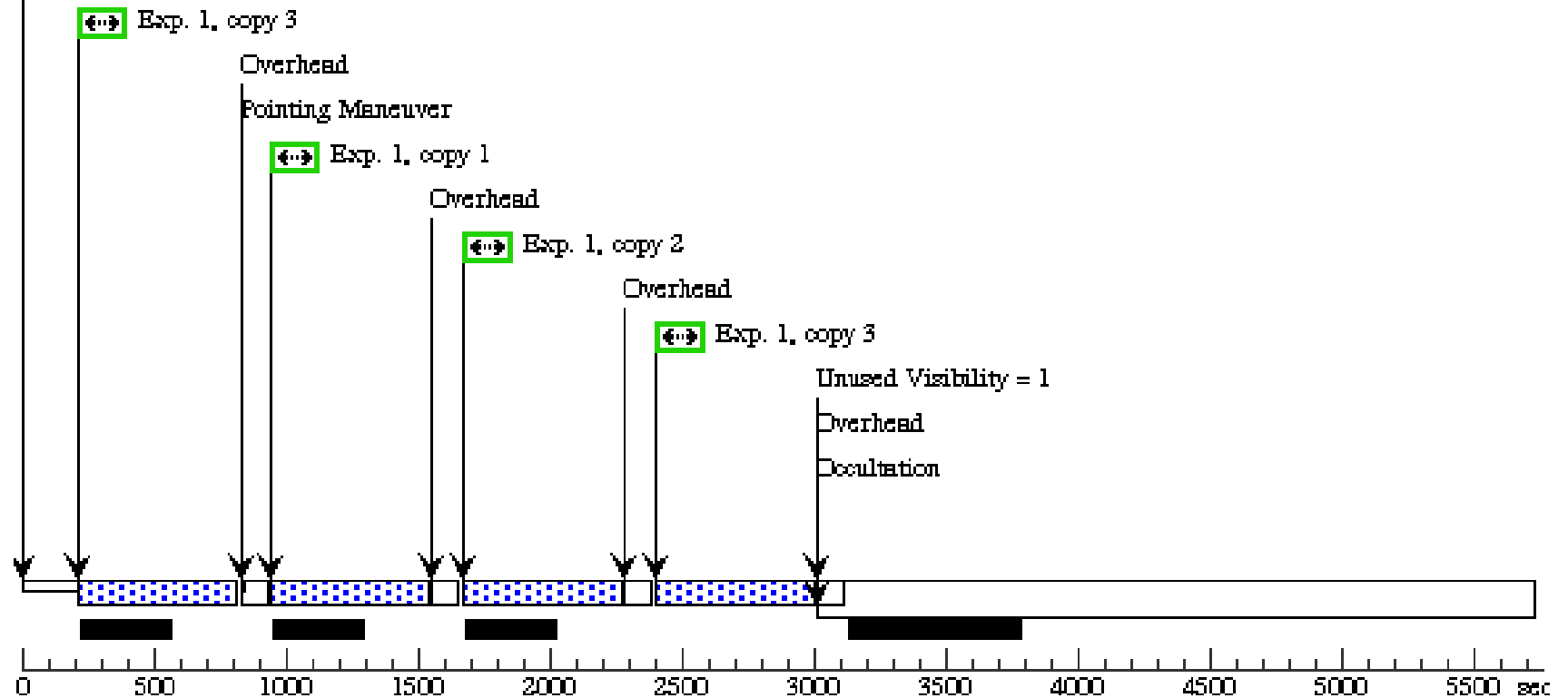
Orbit 2

GS Reacq



Orbit 3

GS Req

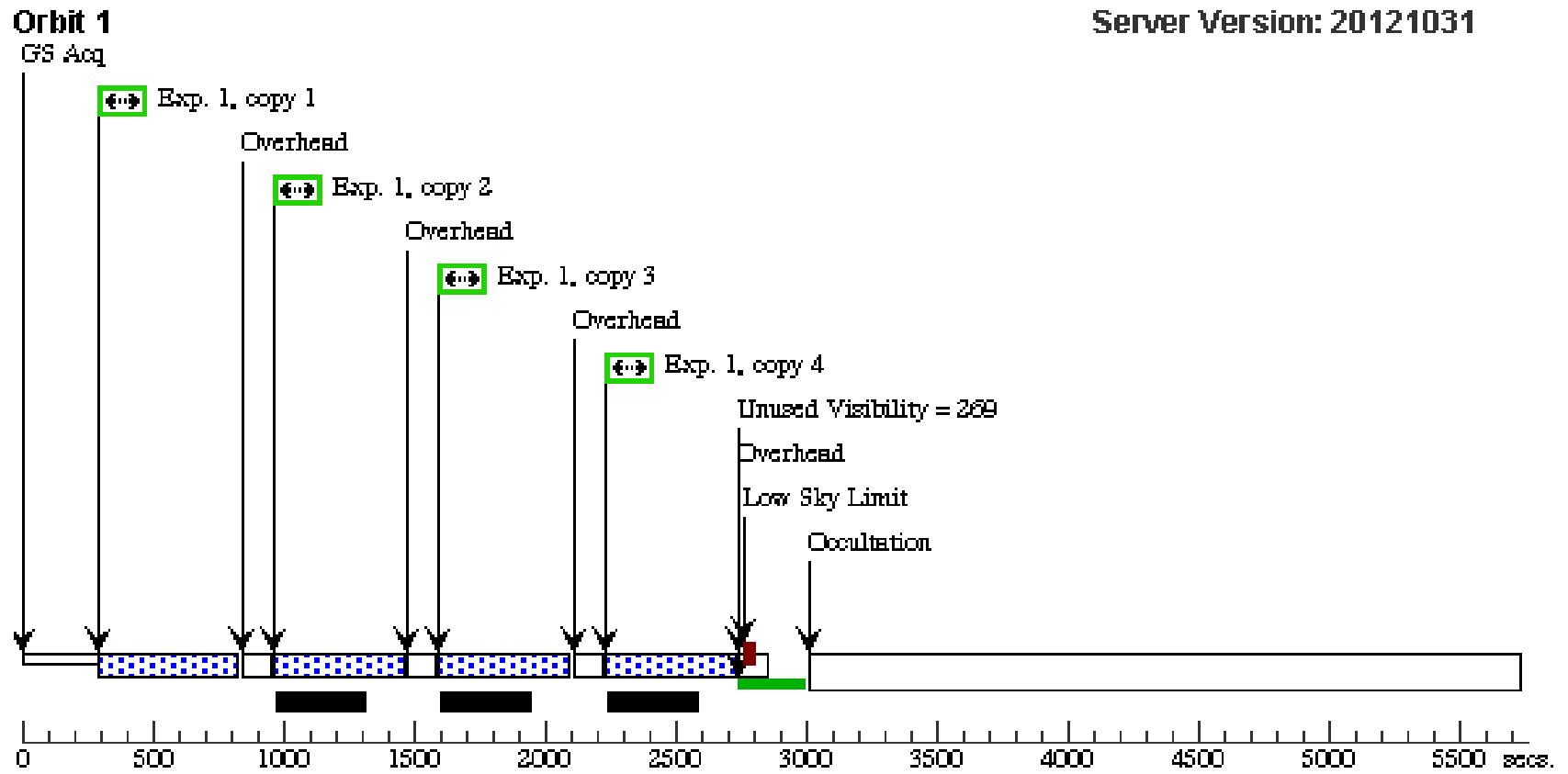


Proposal 12859 - Visit 05 - UV Imaging of LSB Galaxies

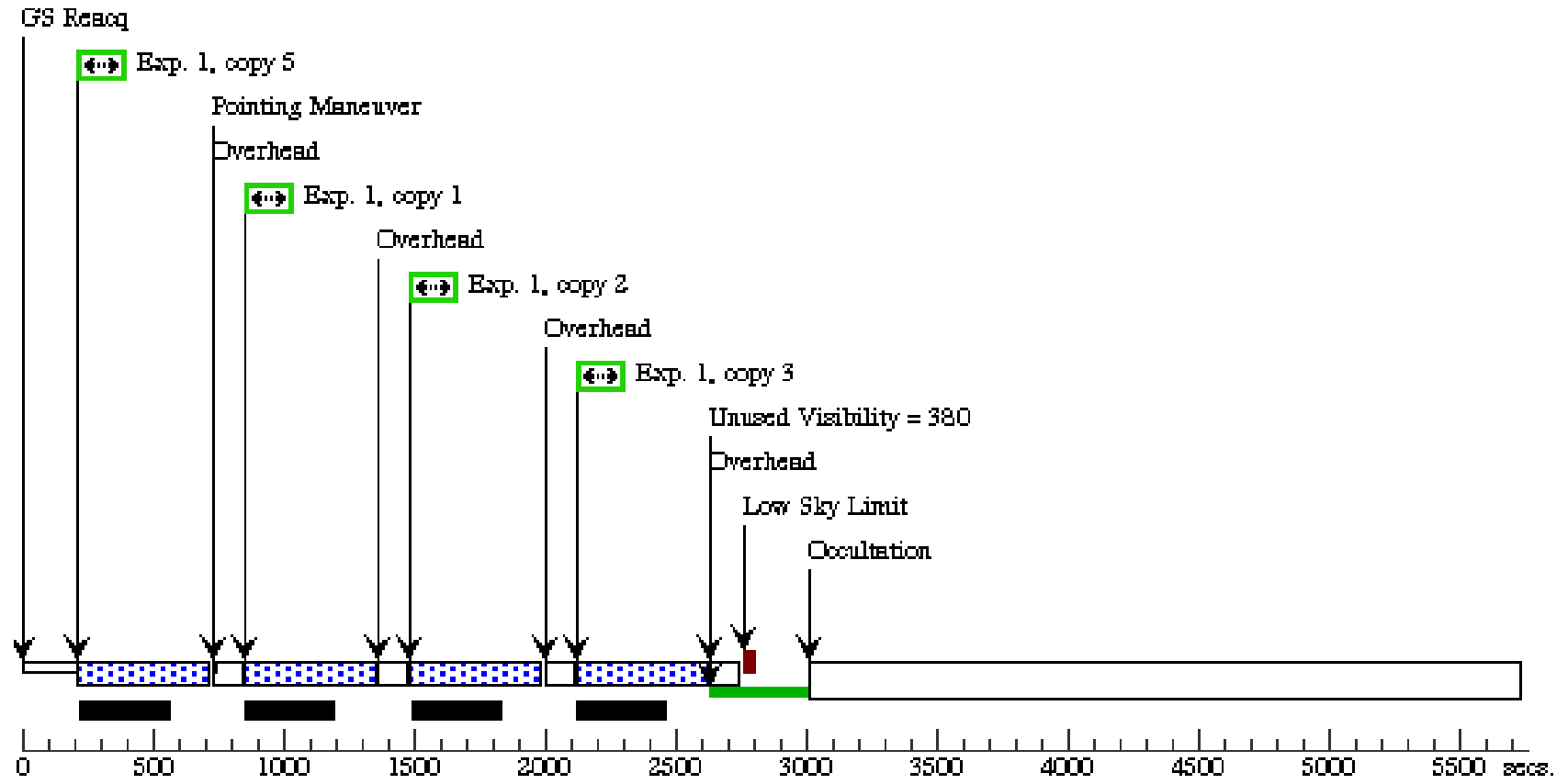
Wed Apr 17 01:03:39 GMT 2013

Visit	Proposal 12859, Visit 05, implementation Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS Special Requirements: SCHED 100%									
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Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(3)	VLSB-F750-V01	RA: 23 54 19.0000 (358.5791667d) Dec: +10 56 36.00 (10.94333d) Equinox: J2000		V=16.3+/-0.1	Reference Frame: ICRS				
	<i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i>									
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(3) VLSB-F750-V01	WFC3/UVIS, ACCUM, UVIS-CENTER	F336W	FLASH=12	LOW-SKY	Pattern 1, Exps 1-1 i n Visit 05 (1)	500 Secs X 5	
									[==>(Pattern 1, Copy 1)]	
									[==>(Pattern 1, Copy 2)]	[1]
									[==>(Pattern 1, Copy 3)]	
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									[==>(Pattern 2, Copy 1)]	[2]
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									[==>(Pattern 2, Copy 3)]	
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								[==>(Pattern 3, Copy 1)]	[3]	
								[==>(Pattern 3, Copy 2)]		
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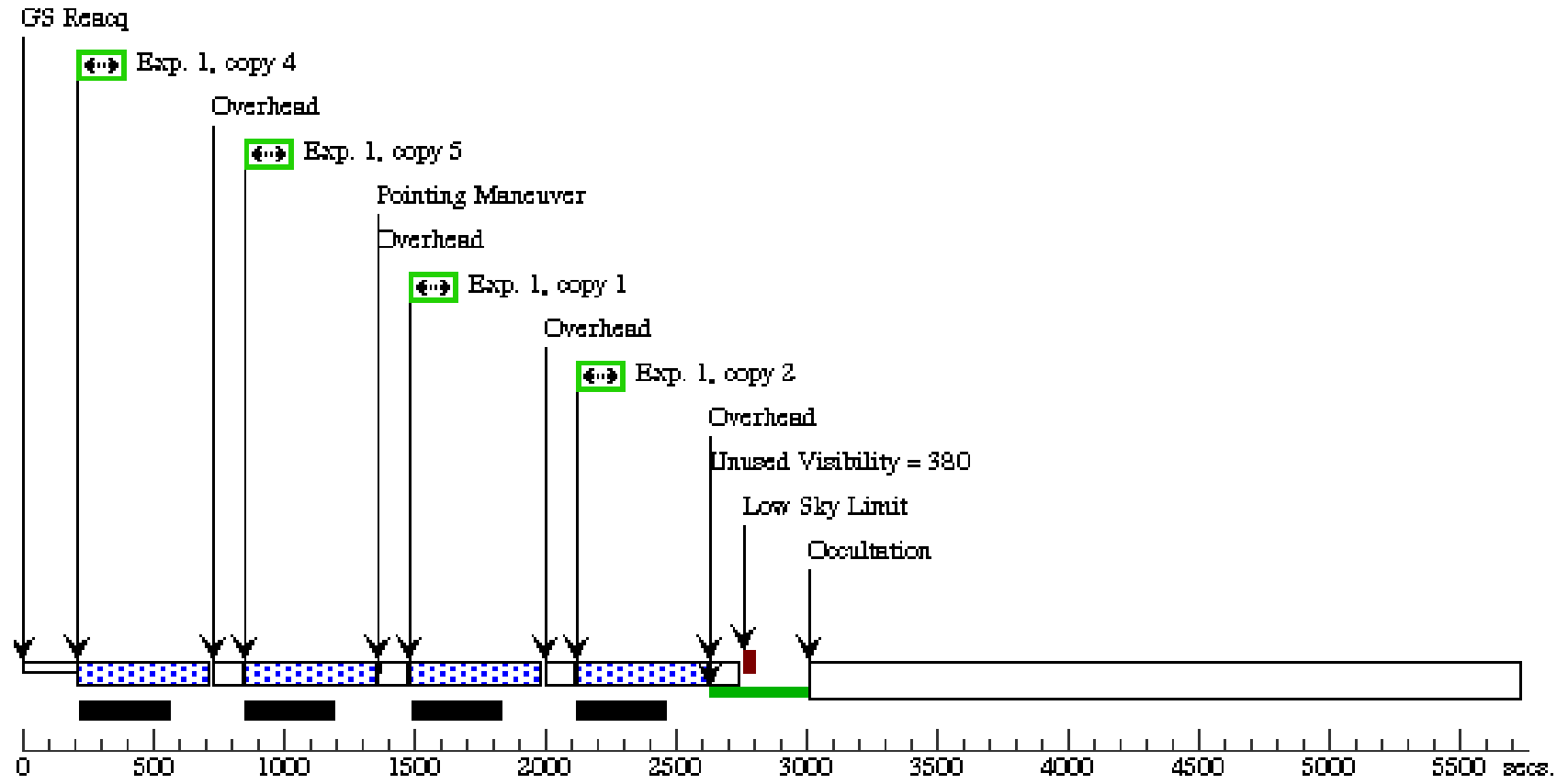
Orbit Structure



Orbit 2

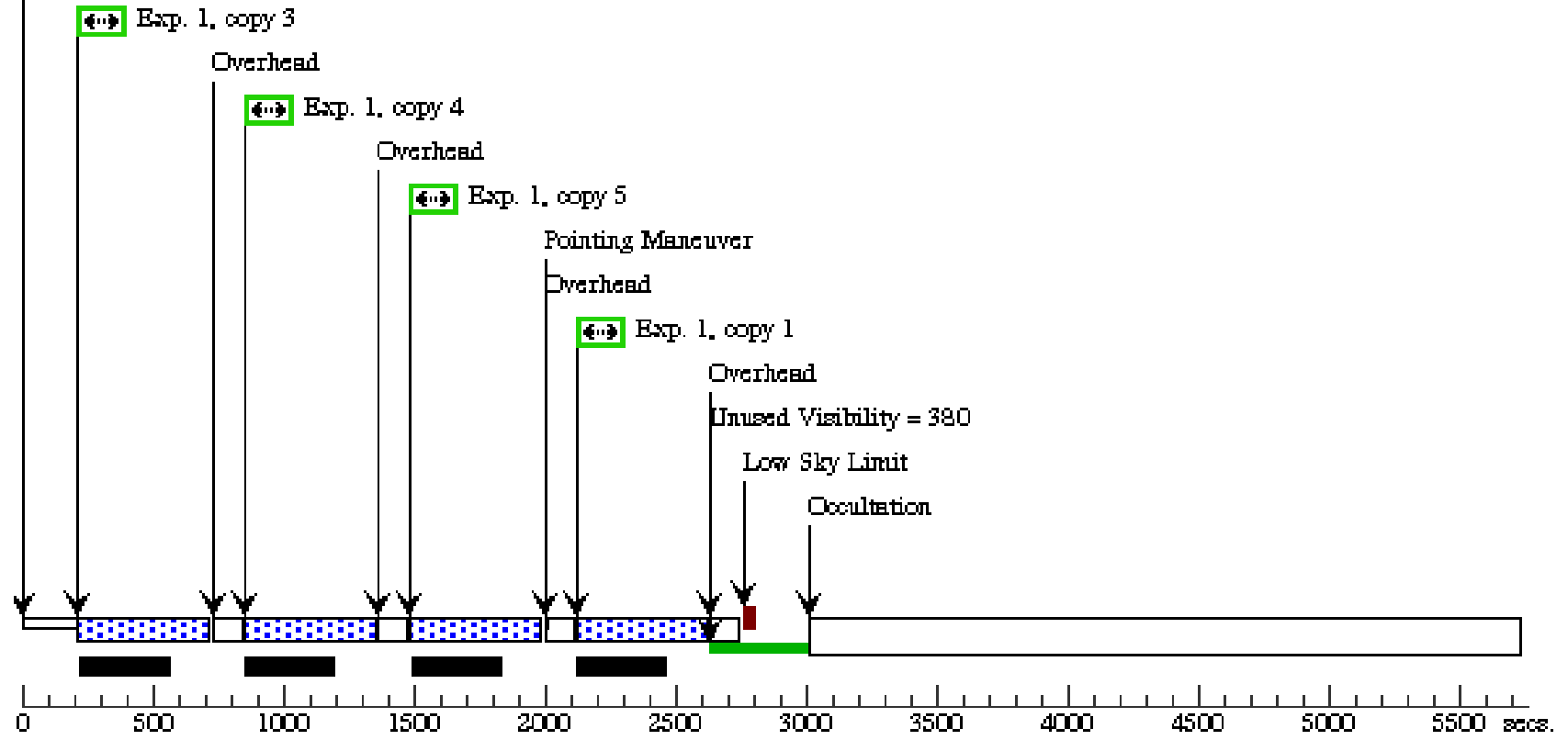


Orbit 3



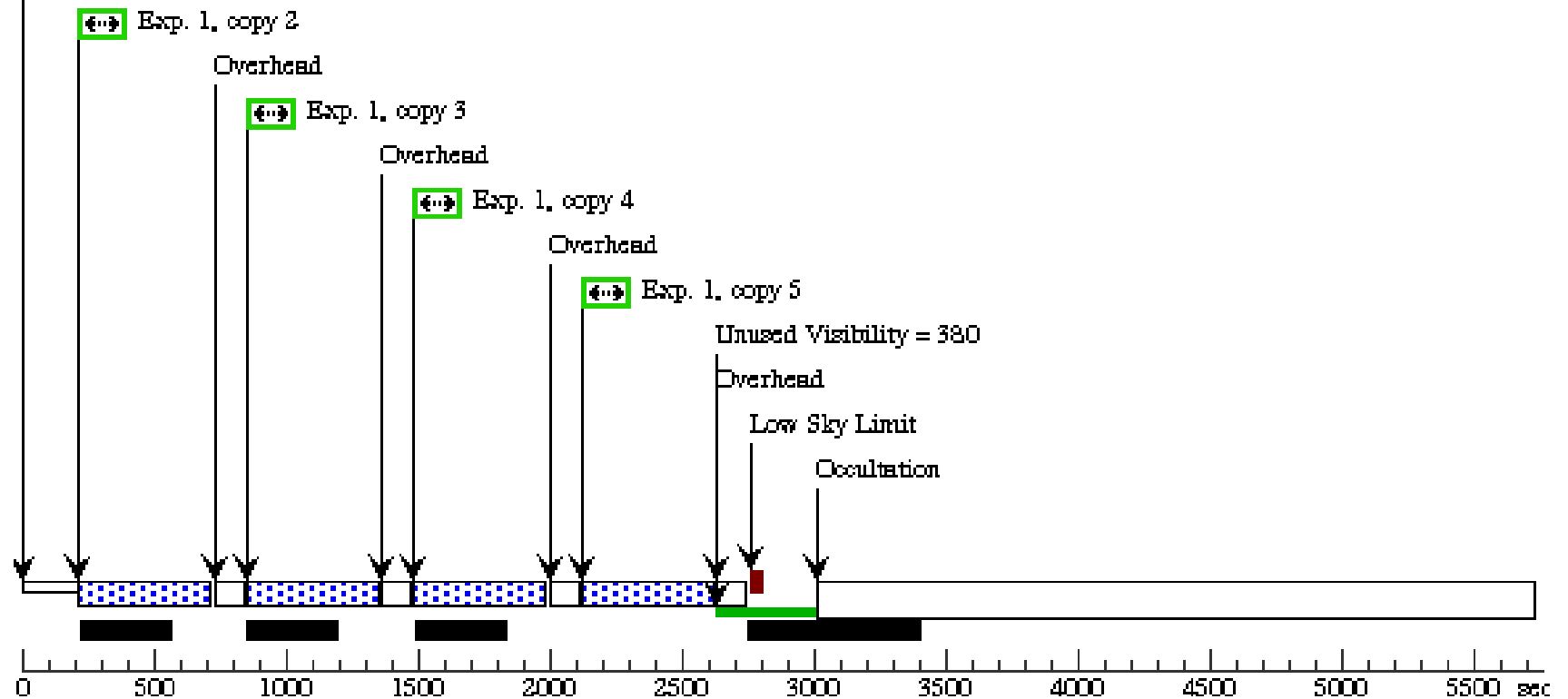
Orbit 4

GS Reacq



Orbit 5

GS Req

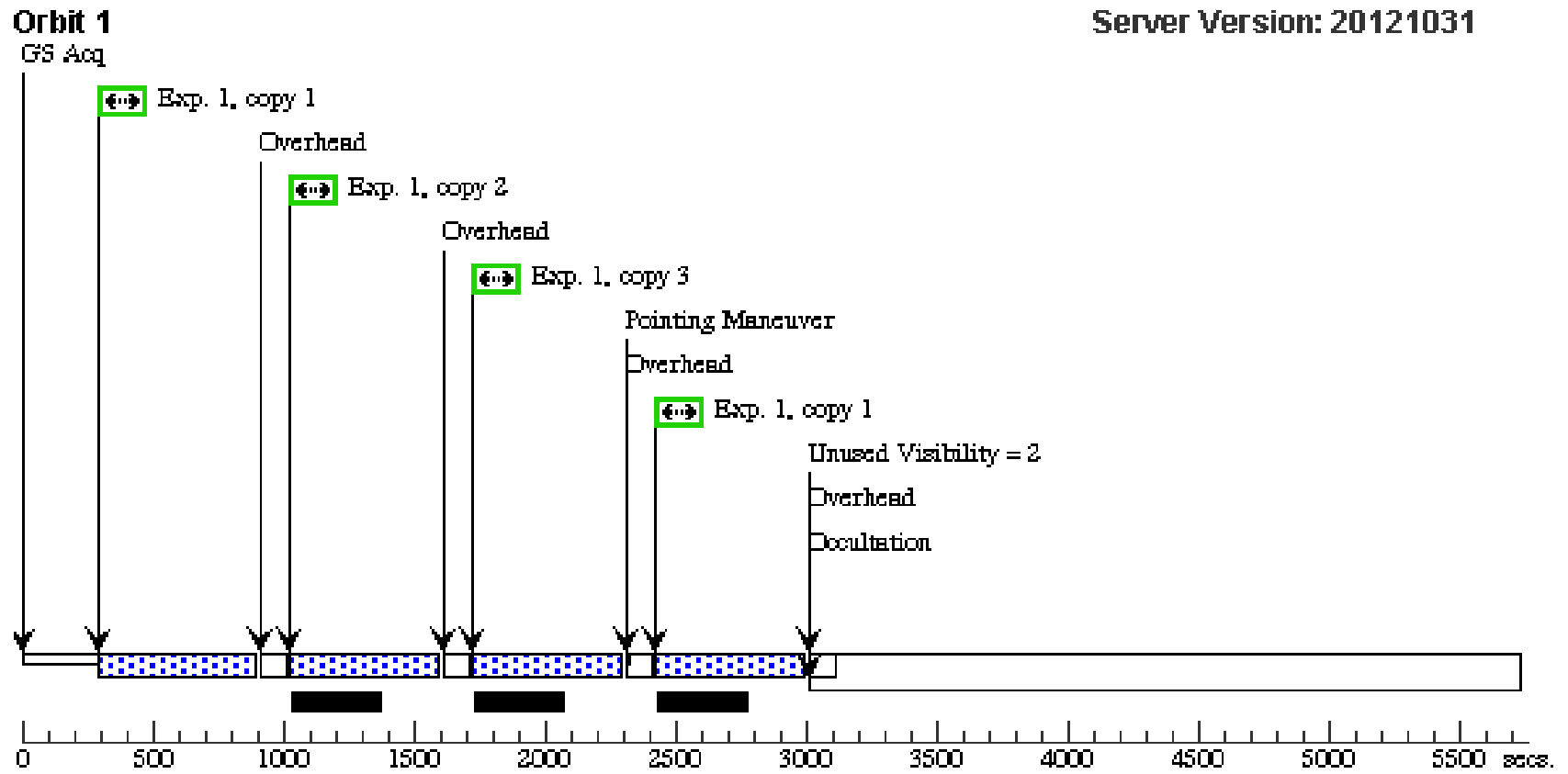


Proposal 12859 - Visit 06 - UV Imaging of LSB Galaxies

Wed Apr 17 01:03:43 GMT 2013

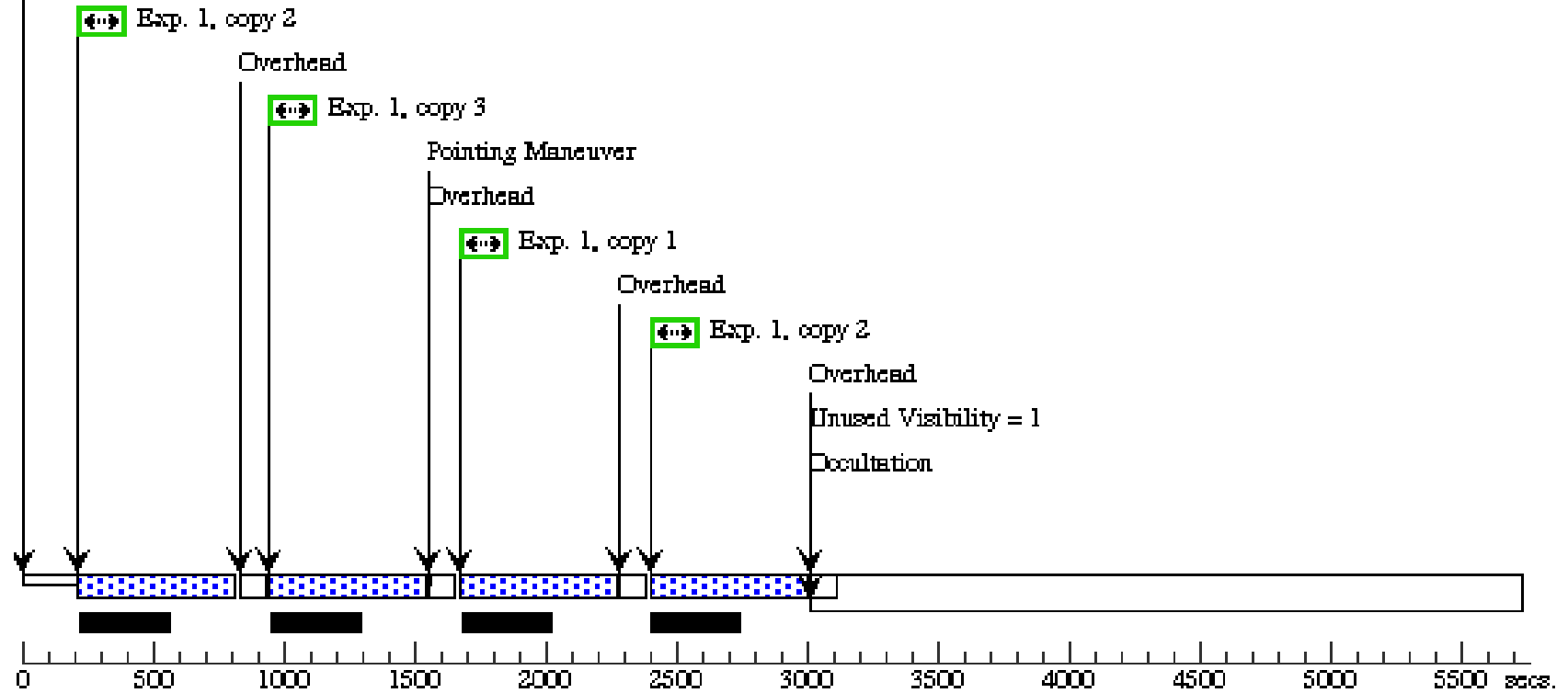
Visit	Proposal 12859, Visit 06, implementation Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS Special Requirements: SCHED 100%									
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Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(3)	VLSB-F750-V01	RA: 23 54 19.0000 (358.5791667d) Dec: +10 56 36.00 (10.94333d) Equinox: J2000		V=16.3+/-0.1	Reference Frame: ICRS				
	<i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i>									
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(3) VLSB-F750-V01	WFC3/UVIS, ACCUM, UVIS-CENTER	F555W				Pattern 1, Exps 1-1 i n Visit 06 (1)	500 Secs X 3 [==>572.0 Secs (Pattern 1, Copy 1)] [==>572.0 Secs (Pattern 1, Copy 2)] [==>572.0 Secs (Pattern 1, Copy 3)] [==>572.0 Secs (Pattern 2, Copy 1)] [==>600.0 Secs (Pattern 2, Copy 2)] [==>600.0 Secs (Pattern 2, Copy 3)] [==>600.0 Secs (Pattern 3, Copy 1)] [==>600.0 Secs (Pattern 3, Copy 2)] [==>600.0 Secs (Pattern 3, Copy 3)] [==>600.0 Secs (Pattern 4, Copy 1)] [==>600.0 Secs (Pattern 4, Copy 2)] [==>600.0 Secs (Pattern 4, Copy 3)]

Orbit Structure



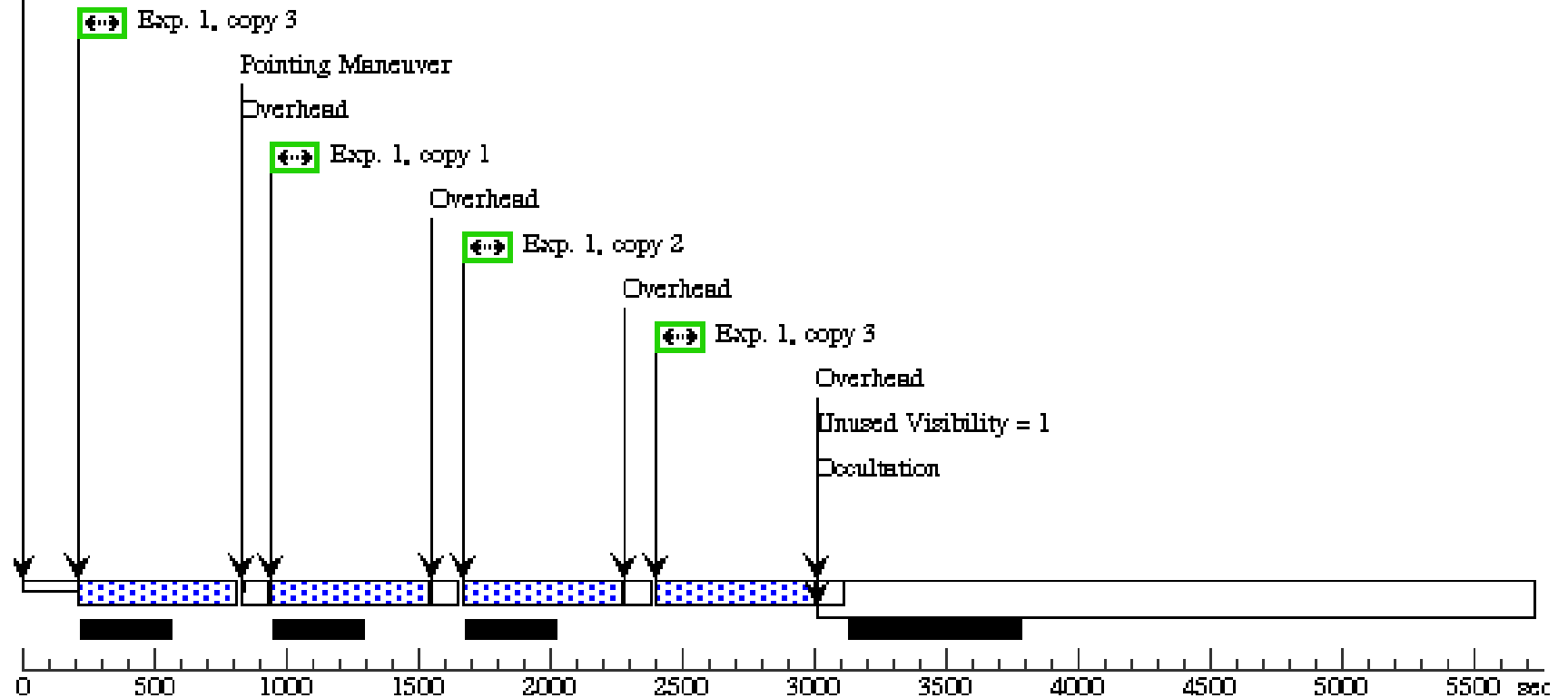
Orbit 2

GS Reacq



Orbit 3

GS Req

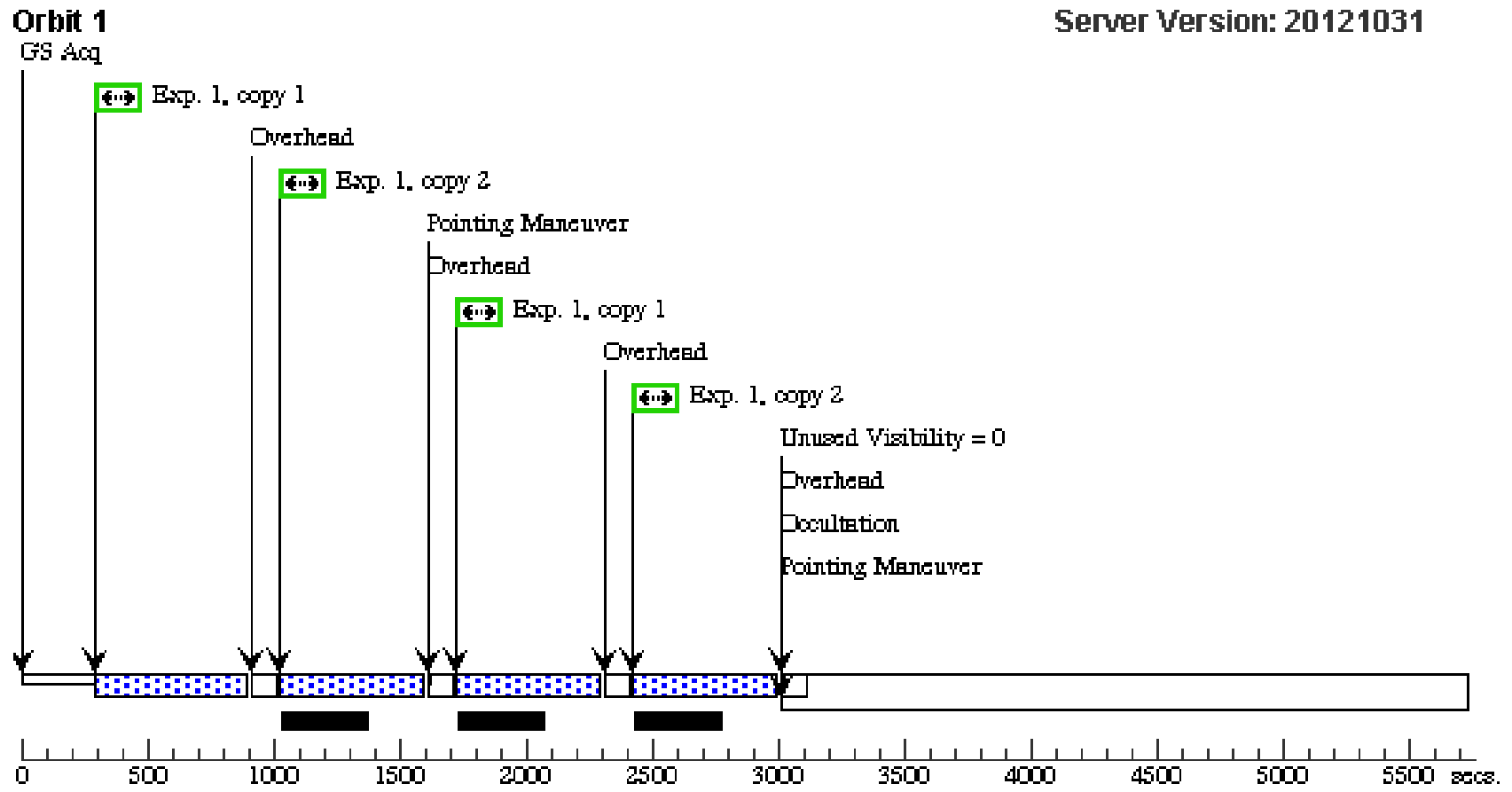


Proposal 12859 - Visit 07 - UV Imaging of LSB Galaxies

Wed Apr 17 01:03:46 GMT 2013

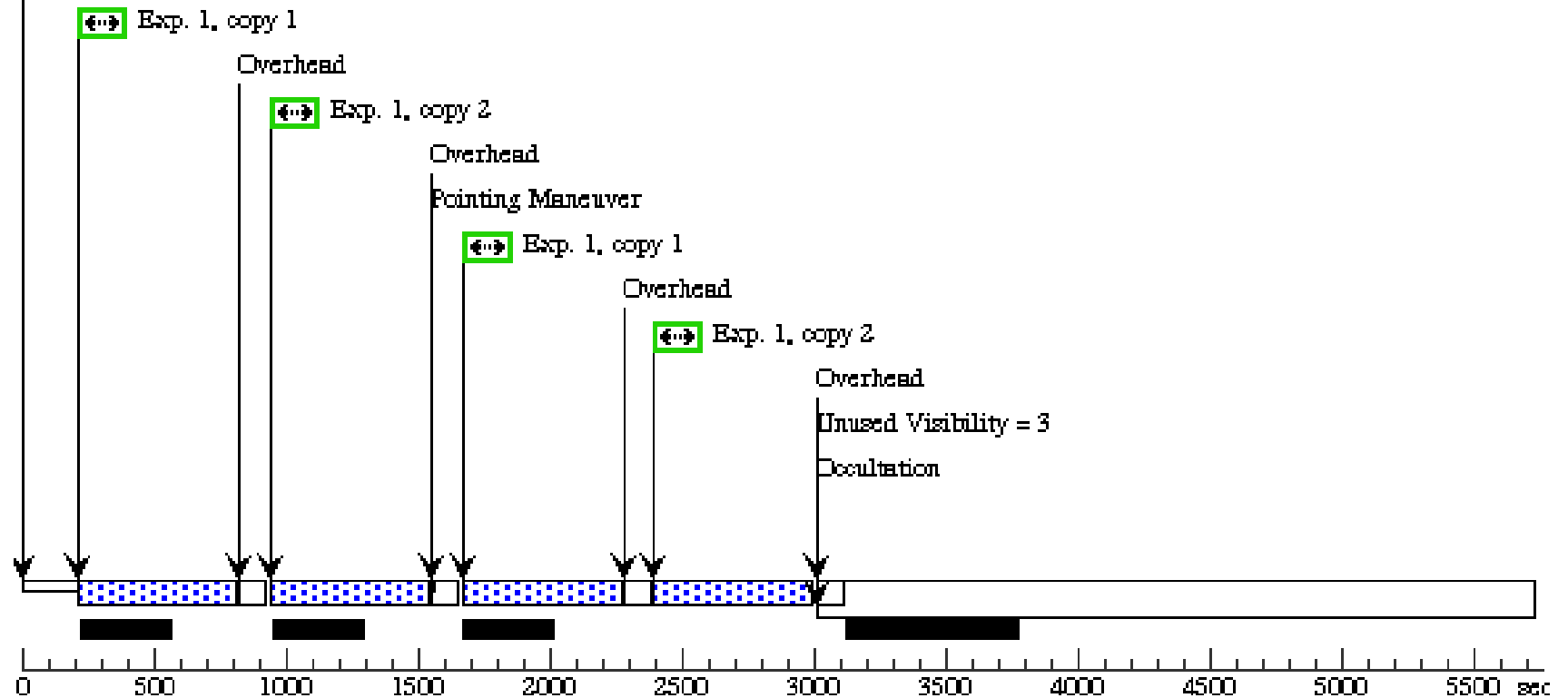
Visit	Proposal 12859, Visit 07, implementation Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS Special Requirements: SCHED 100%									
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Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(1)	LSB-F415-3	RA: 02 32 45.0000 (38.1875000d) Dec: +28 50 18.00 (28.83833d) Equinox: J2000		V=14.7+/-0.1	Reference Frame: ICRS				
<i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i>										
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(1) LSB-F415-3	WFC3/UVIS, ACCUM, UVIS-CENTER	F814W				Pattern 1, Exps 1-1 i n Visit 07 (1)	500 Secs X 2 [==>572.0 Secs (Pattern 1, Copy 1)] [==>572.0 Secs (Pattern 1, Copy 2)] [==>572.0 Secs (Pattern 2, Copy 1)] [==>572.0 Secs (Pattern 2, Copy 2)] [==>599.0 Secs (Pattern 3, Copy 1)] [==>599.0 Secs (Pattern 3, Copy 2)] [==>599.0 Secs (Pattern 4, Copy 1)] [==>599.0 Secs (Pattern 4, Copy 2)]

Orbit Structure



Orbit 2

GS Req

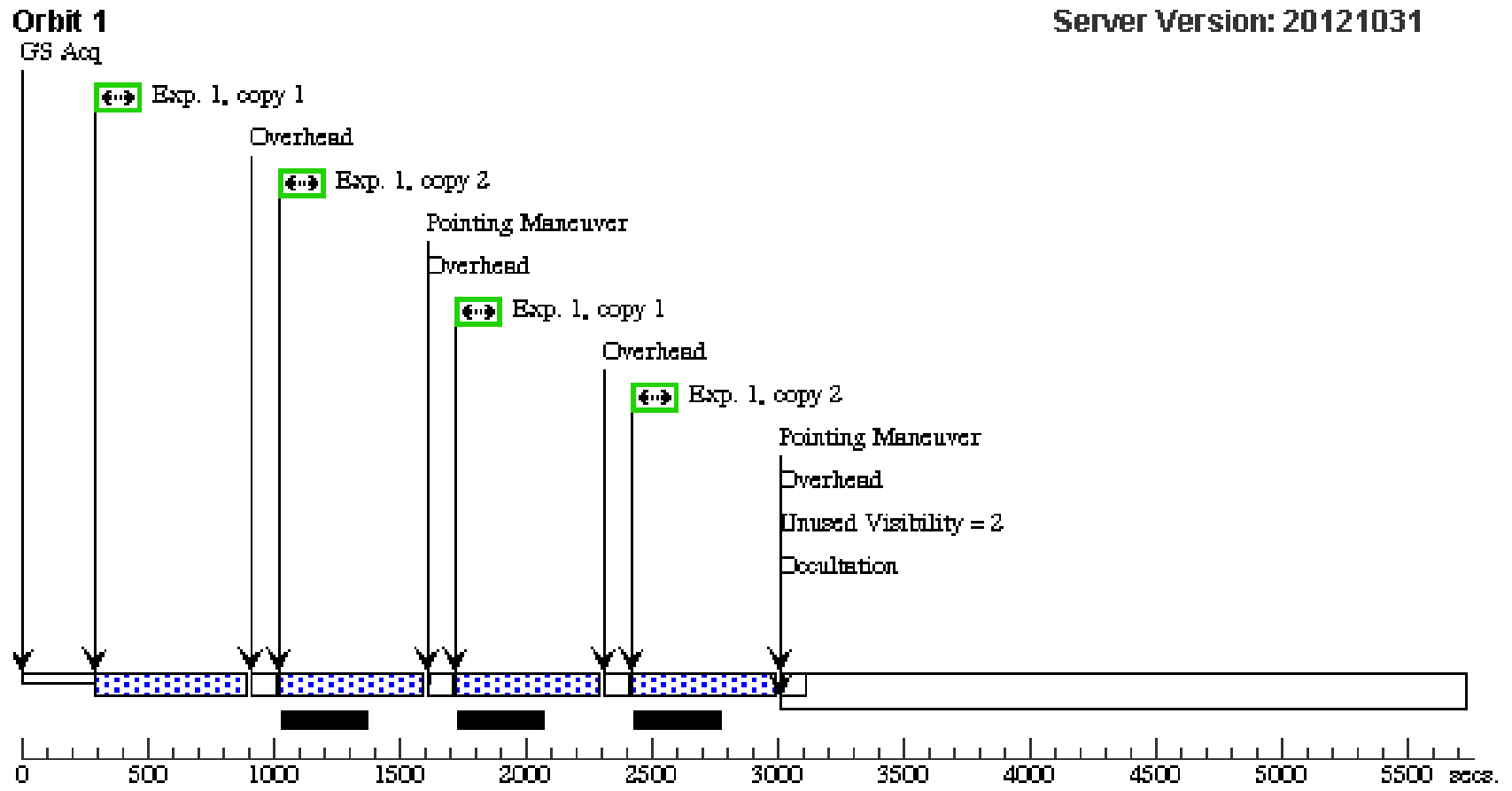


Proposal 12859 - Visit 08 - UV Imaging of LSB Galaxies

Wed Apr 17 01:03:48 GMT 2013

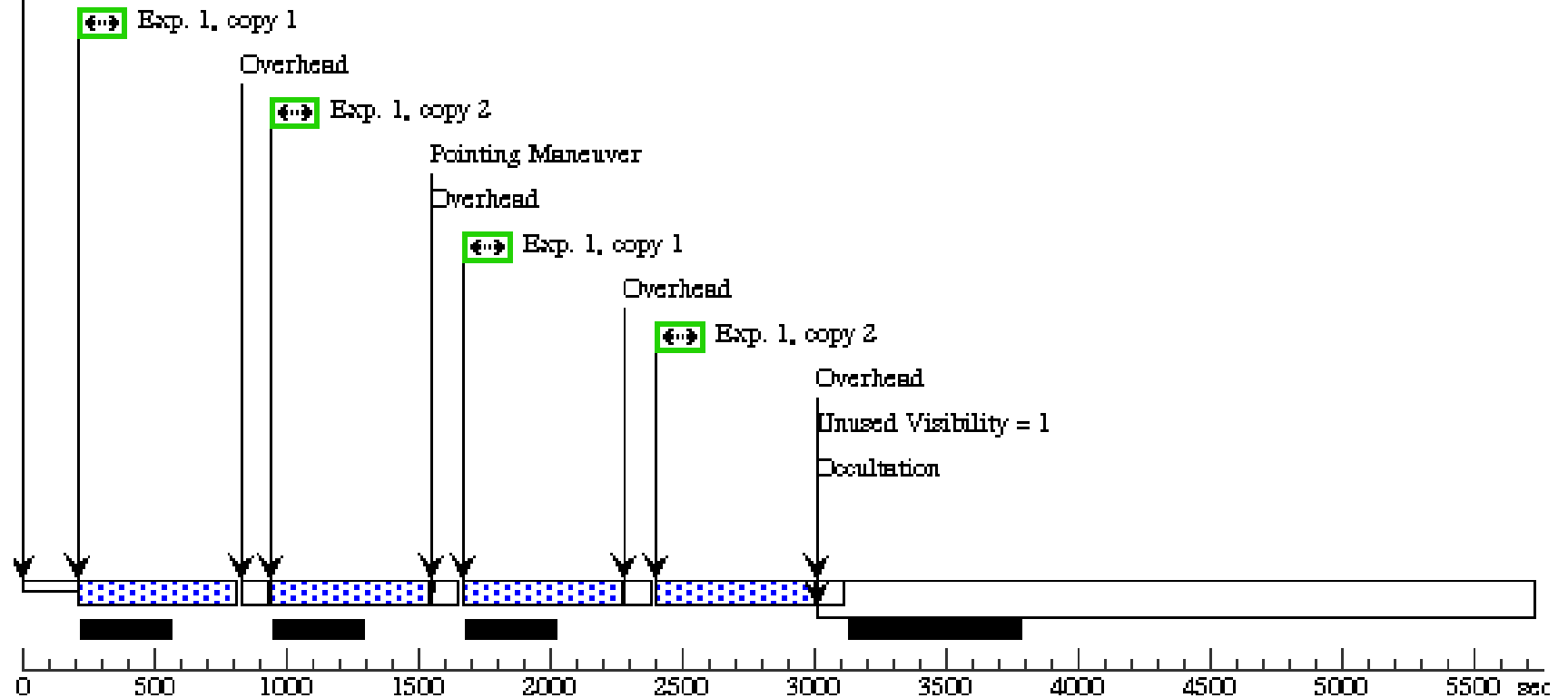
Visit	Proposal 12859, Visit 08, implementation Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS Special Requirements: SCHED 100%									
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		(1)	Pattern Type=WFC3-UVIS-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.173 Line Spacing=0.112	Coordinate Frame=POS-TARG Pattern Orientation=23.884 Angle Between Sides=81.785 Center Pattern=false		(1)				
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(2)	UGC-159	RA: 00 17 16.1700 (4.3173750d) Dec: +17 31 21.60 (17.52267d) Equinox: J2000		V=16.1+/-0.1	Reference Frame: ICRS				
	<i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i>									
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(2) UGC-159	WFC3/UVIS, ACCUM, UVIS-CENTER	F814W				Pattern 1, Exps 1-1 i n Visit 08 (1)	500 Secs X 2 [==>572.0 Secs (Pattern 1, Copy 1)] [==>572.0 Secs (Pattern 1, Copy 2)] [==>572.0 Secs (Pattern 2, Copy 1)] [==>572.0 Secs (Pattern 2, Copy 2)] [==>600.0 Secs (Pattern 3, Copy 1)] [==>600.0 Secs (Pattern 3, Copy 2)] [==>600.0 Secs (Pattern 4, Copy 1)] [==>600.0 Secs (Pattern 4, Copy 2)]

Orbit Structure



Orbit 2

GS Req

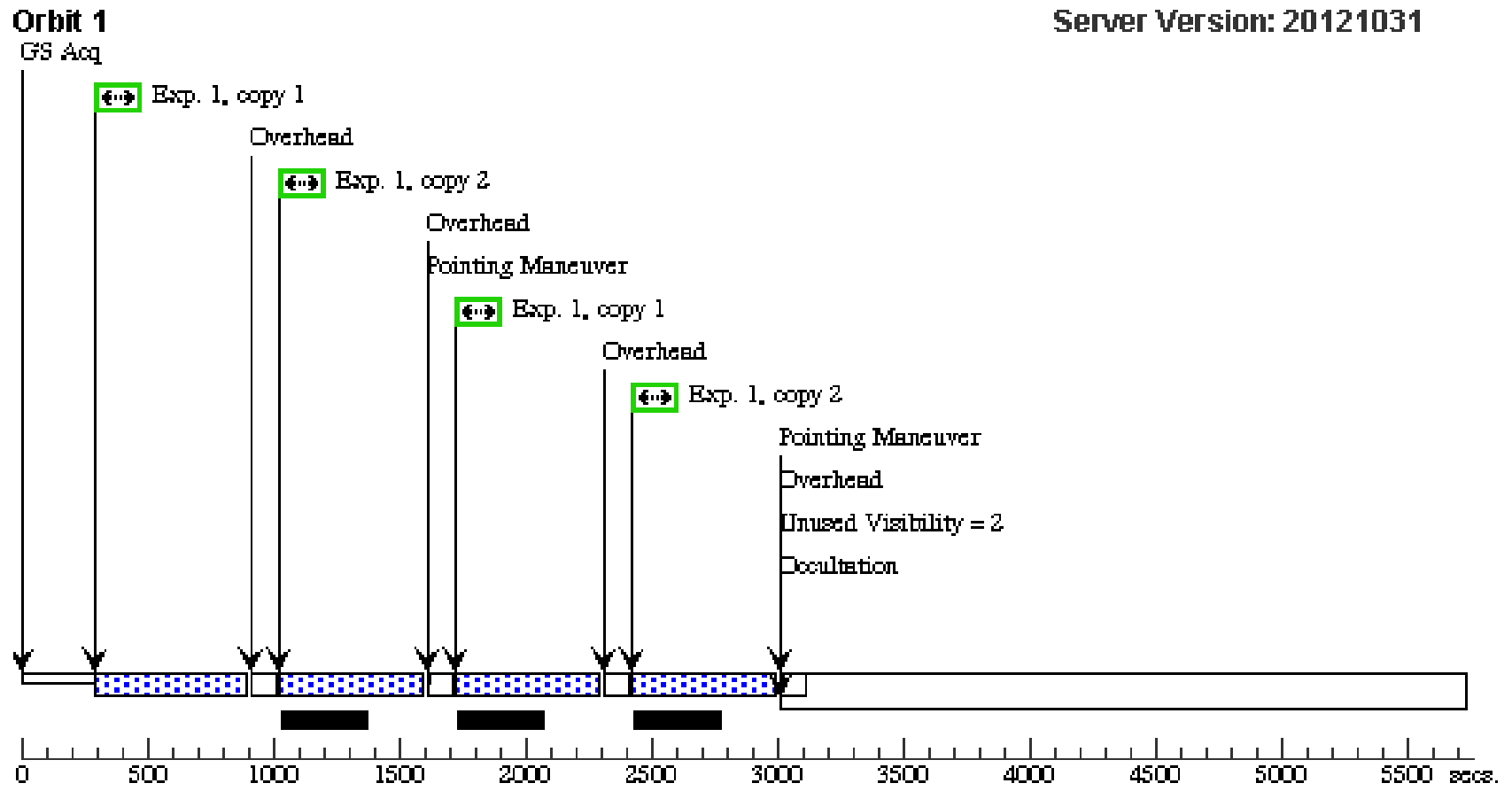


Proposal 12859 - Visit 09 - UV Imaging of LSB Galaxies

Wed Apr 17 01:03:50 GMT 2013

Visit	Proposal 12859, Visit 09, implementation Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS Special Requirements: SCHED 100%									
	Patterns	#	Primary Pattern	Secondary Pattern	Exposures					
		(1)	Pattern Type=WFC3-UVIS-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.173 Line Spacing=0.112	Coordinate Frame=POS-TARG Pattern Orientation=23.884 Angle Between Sides=81.785 Center Pattern=false		(1)				
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(3)	VLSB-F750-V01	RA: 23 54 19.0000 (358.5791667d) Dec: +10 56 36.00 (10.94333d) Equinox: J2000		V=16.3+/-0.1	Reference Frame: ICRS				
<i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i>										
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(3) VLSB-F750-V01	WFC3/UVIS, ACCUM, UVIS-CENTER	F814W				Pattern 1, Exps 1-1 i n Visit 09 (1)	500 Secs X 2 [==>572.0 Secs (Pattern 1, Copy 1)] [==>572.0 Secs (Pattern 1, Copy 2)] [==>572.0 Secs (Pattern 2, Copy 1)] [==>572.0 Secs (Pattern 2, Copy 2)] [==>600.0 Secs (Pattern 3, Copy 1)] [==>600.0 Secs (Pattern 3, Copy 2)] [==>600.0 Secs (Pattern 4, Copy 1)] [==>600.0 Secs (Pattern 4, Copy 2)]

Orbit Structure



Orbit 2

GS Req

